



Australian Orchid Review

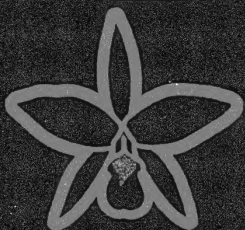
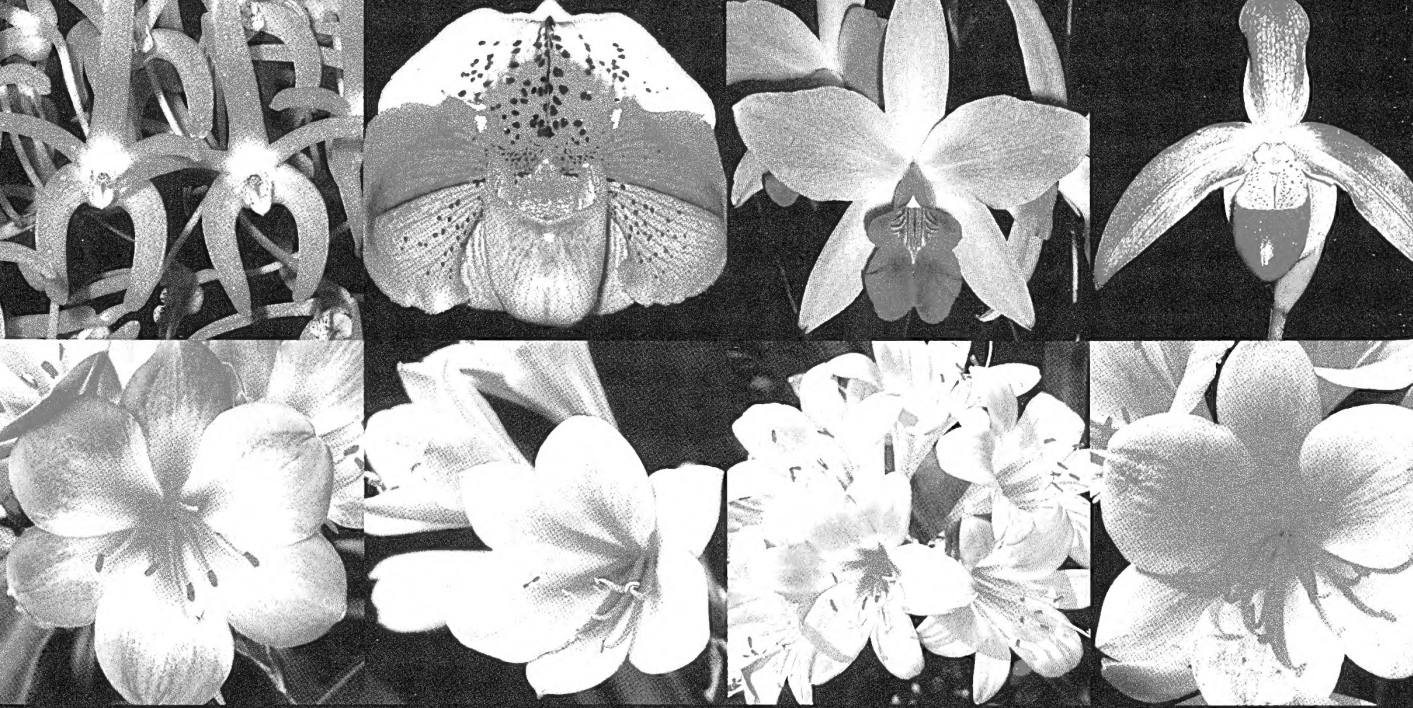
FEBRUARY – MARCH 2012

\$8.95
R.R.P.
(includes GST)

VOLUME 77 – No. 1

Royal Botanic Gardens
Melbourne
16 FEB 2012
LIBRARY

www.australianorchidreview.com.au



HILLS DISTRICT ORCHIDS

Autumn Open Day Sunday 26 February 2012

@183 Windsor Road Northmead 2152 NSW

9am til 4pm (please park in Mary Street or Windermere Avenue)

*Heaps of flowering orchids, rare species and unusual plants for sale,
as well as a full range of orchid related supplies and new and exclusive
Clivia miniata seedlings in a full range of colours.*

also attending:

Tinonee Orchid Nursery, Macquarie Native Orchids, Melanquin Bromeliads and Florilegium Books

Phone: David Banks on (02) 9674 4720 or 0412 123 036

E-mail: david@hillsdistrictorchids.com

HDO Open Days are held 4 times a year:

Autumn: Last Sunday in February (26 February 2012)

Winter: Last Sunday in July [with Easy Orchids] (29 July 2012)

Spring: Second Last Sunday in September (for 2012) (23 September 2012)

Summer: First Sunday in December [with Dark Star Orchids] (2 December 2012)

www.hillsdistrictorchids.com

From the Editor's Desk

The 19th Australian Orchid Conference & Show is to be held in Perth, Western Australia from 11-16 September 2012. Johan Hermans will be one of the international speakers at this conference. Johan is Chairman of the Royal Horticultural Society (U.K.) Orchid Committee and the Advisory Committee on Orchid Hybrid Registration. He is a World Orchid Conference Trustee and an Honorary Research Associate of the Royal Botanic Gardens Kew. He has a special interest in the Orchids of Madagascar and he has written a comprehensive introduction to their orchid flora in this issue.

Geoff Bailey from the Cymbidium Orchid Society of Victoria has written an overview of the Cymbidiums that have been bred and grown by Peter Sunderland of Kimberley Orchids (with photographs by Terry Poulton). Cymbidium enthusiasts were very pleased with the coverage of their favourite plants in the previous issue. The National Orchid Extravaganza at Dural NSW is one of the most prestigious Cymbidium hybrid dominated shows in the world, with many attending from throughout Australia to visit and/or bench their plants. This event has rightly become a Mecca for "Cymbid" enthusiasts in the Southern Hemisphere.

I have fielded some queries regarding the lack of coverage of the 2011 National Cymbidium Show. The simple fact is there was nothing submitted to us. No article, no photos, no list of prize winners, nothing! Surely the three State Cymbidium clubs/societies (or the national body) each have publicity officers to ensure such events get wider coverage, exposure and promotion. Such articles do not appear out of thin air. Sure, they can cater for their own members via a joint club newsletter, but they are already preaching to the converted. You don't attract new members that way. I know many growers strive to have photos of their prize winning plants featured in the AOR, which also goes out to the wider orchid growing community in Australia and overseas, plus it's read by a growing number of keen gardeners. (Many commercial growers value dominant photos in this publication higher than any quality awards such plants may or may not receive.) The AOR has by far the largest circulation of any Australian orchid periodical, and is still the least expensive and best value, being under \$50 for a year's subscription of six jam-packed and informative full-colour issues.

Gordon Giles discusses some other aspects of orchid judging, particularly as it relates to champions and best of show. His articles always make interesting reading, and it does make you wonder what direction many of the various judging panels are taking, especially as it relates to awarded plants. At least he has the confidence and conviction to put his writings into print for all to see.

We have a couple of articles on Australian terrestrial orchids, including a report on the discovery of the genus *Danhatchia* in Australia. The monotypic genus (with only one species: *Danhatchia australis*) was previously thought to be endemic to New Zealand. It is not a showy species but one of serious botanical interest, and a significant find, especially as it has been found in two different locations some 400 kilometres apart. The AOR continues to be the leader in articles on our indigenous orchids and their hybrids.

Jim Cootes contributes a discussion on the floral variation within the widespread tropical terrestrial Bamboo Orchid - *Arundina graminifolia*. Whilst Murray Shergold of Easy Orchids (Woodburn, NSW) introduces us to a rare monopodial epiphyte from northern Borneo that was only recently described.

David Banks
Australian Orchid Review
david@hillsdistrictorchids.com



FEBRUARY – MARCH 2012
Volume 77 – No. 1

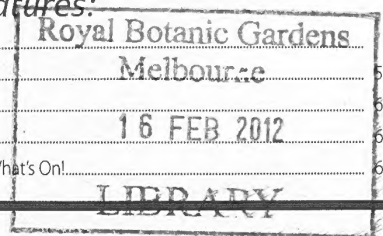
Contents

Features:

The Orchids of Madagascar (An Overview)	Johan Hermans	2
The Kimberley Connection:		
The Peter Sunderland and Kimberley Orchids Story	Geoff Bailey	32
More Thoughts on Orchid Judging	Gordon Giles	41
<i>Arundina graminifolia</i>		
- A Picture of Variability	Jim Cootes	44
<i>Danhatchia australis</i> in Australia	David Banks	48
Some of my Favourite Native Ground Orchids:		
"so many orchids, so little time"	Tony Rodgers	50
<i>Dimorphorchis tenomeris</i>	Murray Shergold	57
AOF Essay Prize		58
Orchid Mixes and Bacteria	Ken Stewart	63

Regular Features:

From the Editor's Desk	1
Mail Order Bookshop	59
Advertiser's Index	64
Buyer's Guide	64
2012 Orchid Events – What's On!	64



Editorial copy:

Articles for publication and consideration should be sent to:
AOR Editor, David P. Banks, 39 Carole Street, Seven Hills, NSW 2147
Email: david@hillsdistrictorchids.com

All other correspondence to:
AOR Publisher, Hills Orchid Publishing Pty Ltd, PO Box 4812, North Rocks, NSW 2151
☎ 0433 422 792

Advertisers:

Deadline for advertising copy for the
April – May 2012 issue is Monday, 5 March, 2012

All advertising bookings and enquiries should be directed to:
Caitlin Hoolahan ☎ 0433 422 792 Fax: (02) 9221 4242 or

Email: sales@australianorchidreview.com.au or
David Banks ☎ (02) 9674 4720 Email: david@hillsdistrictorchids.com

Subscriptions:

See page 61 for Subscription information



Cover Shot

Angraecum popowii is a recently described species from Madagascar. Read about this and other native orchids from this exotic island in the feature article by author and photographer Johan Hermans.

Angraecum magdalenae
in the wild



The Orchids of *Madagascar* (An Overview)

by Johan Hermans

Introduction

Until recently little accessible information could be found on the orchid flora of Madagascar; most literature being rare and in French. However, during the last ten years research projects by the Royal Botanic Gardens Kew have increased our knowledge and resulted in several major publications culminating in a popular Field Guide to the orchids of the Island. This in turn has sparked further work by other botanists and amateurs around the world. Much is still to be discovered and several new species are found every year but it is likely that even more are disappearing due to forest destruction and erosion. This article - a meandering voyage through the different habitats of Madagascar - will hopefully give a deeper insight in the immense variety and beauty of the orchids of the hottest hotspot of biodiversity.

Madagascar

Madagascar is the fourth largest island in the world, it lies south of the equator, approximately three hundred kilometres off the east coast of Africa. The Tropic of Capricorn passes through the south. The island was separated from the mainland around 165 million years ago and in this way developed a much specialised, largely endemic flora and fauna. The Island is deceptively large, its total land area is 587,000 square kilometres, it is 1600 kilometres long and 580 kilometres wide. It is thought that the first inhabitants arrived from Indonesia and Malaya about 2000 years ago followed by migration from mainland Africa and elsewhere. The country has a remarkable variety of vegetation zones, going from tropical rainforest through cool and fertile highlands to virtual desert. Recent research recognises just under 1000 different orchids on the Island in 60 different genera, 85% of species are endemic, over one in ten vascular plants on Madagascar are orchids. The following are some of the different geographical areas and just a few of their typical orchids.

The East

This area forms a long belt along the East coast at elevations between sea level and 900 metres, it is under the influence of the SE trade winds, which promote cloud formation and heavy rainfall throughout the year. Average annual rainfall is over 2000mm; it reaches 5000mm in parts of the Masoala peninsula in the NE. There is no marked dry season at lower elevations and only a brief one higher up where it is cooler so broad-leaf evergreen forest is supported. Temperatures are generally high with mean winter readings in the coldest season ranging from 18°C at sea level to 10°C at the top of the escarpments. A rapidly shrinking part is still covered in original dense, evergreen forest, species diversity is high.

Typical vegetation includes numerous palms, *Pandanus*, *Canarium* and in more degraded parts, *Ravenalia*, the Travellers' Palm. A few typical orchids include:

Aerangis articulata carries a 20 centimetre flower spike with 15 to 20 almost transparent white flowers. The species grows in the shadier parts of semi-evergreen forest. *Aerangis articulata* started its taxonomic life in the *Gardeners' Chronicle* of 1872 when it was described by the German botanist H. G. Reichenbach f. as *Angraecum articulatum* from plants originally discovered by the Rev. William Ellis, one of



England's pioneering missionaries to Madagascar. Ellis had succeeded in bringing home only three plants alive, which he cultivated after returning to England. The plants were subsequently acquired by the English horticulturist John Day, who supplied Professor Reichenbach with flowers towards the end of 1871. Reichenbach in his description of the new plant shows a slight bewilderment not unfamiliar to those first faced with the amorphous white shapes of the Angraecoid orchids. He writes: " ... yet, as if to indulge in the pleasure of not having less than six perigonal segments, there is one flower that bears three petals in lieu of the customary two. How can I describe the spur? it is straight, filiform, acute, but do not ask for its length... The column, too is full of caprices... In other cases it indulges morphological fun, even bearing before it two filiform arms, but with polleniferous knobs; thus aping the filaments of such plants that have not the honour of being Orchids." The species was later transferred into the genus *Aerangis*.

Aerangis ellisii is another plant brought back by the Reverend Ellis. It is strongly night scented of *Gardenia*. There are now two distinct entities recognised; the normal form and the considerably larger flowered *A. ellisii* var. *grandiflora*. The species can still be found growing epiphytically in the Eastern rainforest but it also grows as a lithophyte in the central area of the Island. Plants growing in this habitat tend to have a distinct upright stem. It flowers at the same time of year as *A. articulata*, this has probably contributed to the confusion between the two, although the spur of *A. articulata* is pure white and its apical flowers are larger than the basal ones; *A. ellisii* flowers have a pink/brown spur and are all the same size on the inflorescence.

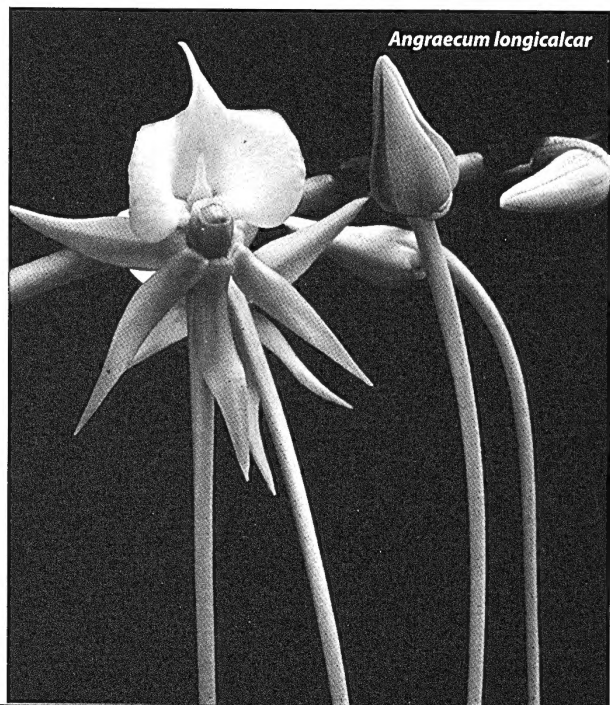


Aerangis ellisii

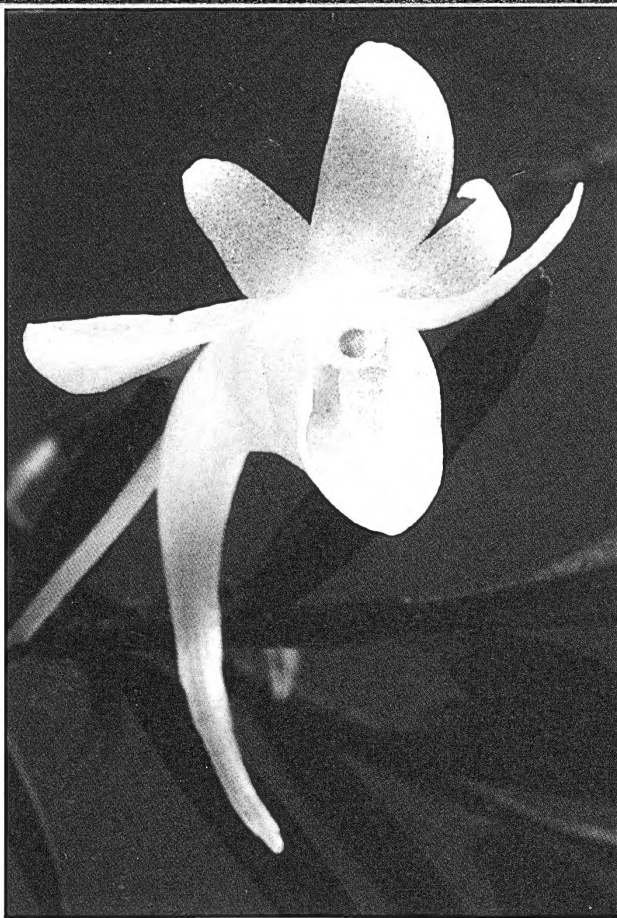


Angraecum eburneum

Far more gigantic is *Angraecum eburneum*, the thick leathery leaves form a half metre wide fan shape, the flower spikes reach above the leaves, carrying a good dozen glistening greenish white fragrant flowers. This species is very variable both in shape and size. In drier areas towards the Southern end of its distribution, succulent characteristics and smaller flowers are more pronounced, this variant is known as *A. eburneum* subsp. *xerophyllum*. In its central distribution, a form with a gigantic spur that can reach up to 40 centimetres is known as *Angraecum longicalcar*. It is one of the few species also known from mainland Africa, where it is called *Angraecum eburneum* subsp. *giryamae*.



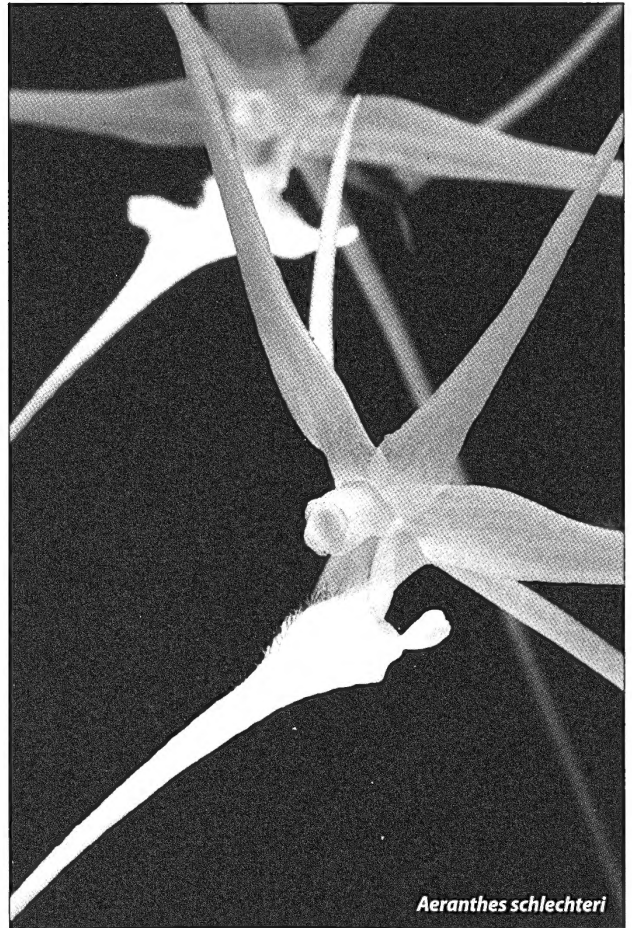
Angraecum longicalcar



Above: *Angraecum platycornu*

Much smaller Angraecoids, but in no way less interesting, include the newly described *Angraecum platycornu* with a greatly expanded spur opening, the flowers are about 6 cm. Even more elegant is *Aeranthus schlechteri* a rare beauty of the Eastern forest with flowers that float in mid-air suspended from a thin and very long inflorescence, it grows in dappled shade on the cool side of forested escarpments. *Neobathiea grandidieriana*, sometimes seen in the trade as *N. filicornu*, comes from a very similar habitat.

Below: *Aeranthus schlechteri* in the wild

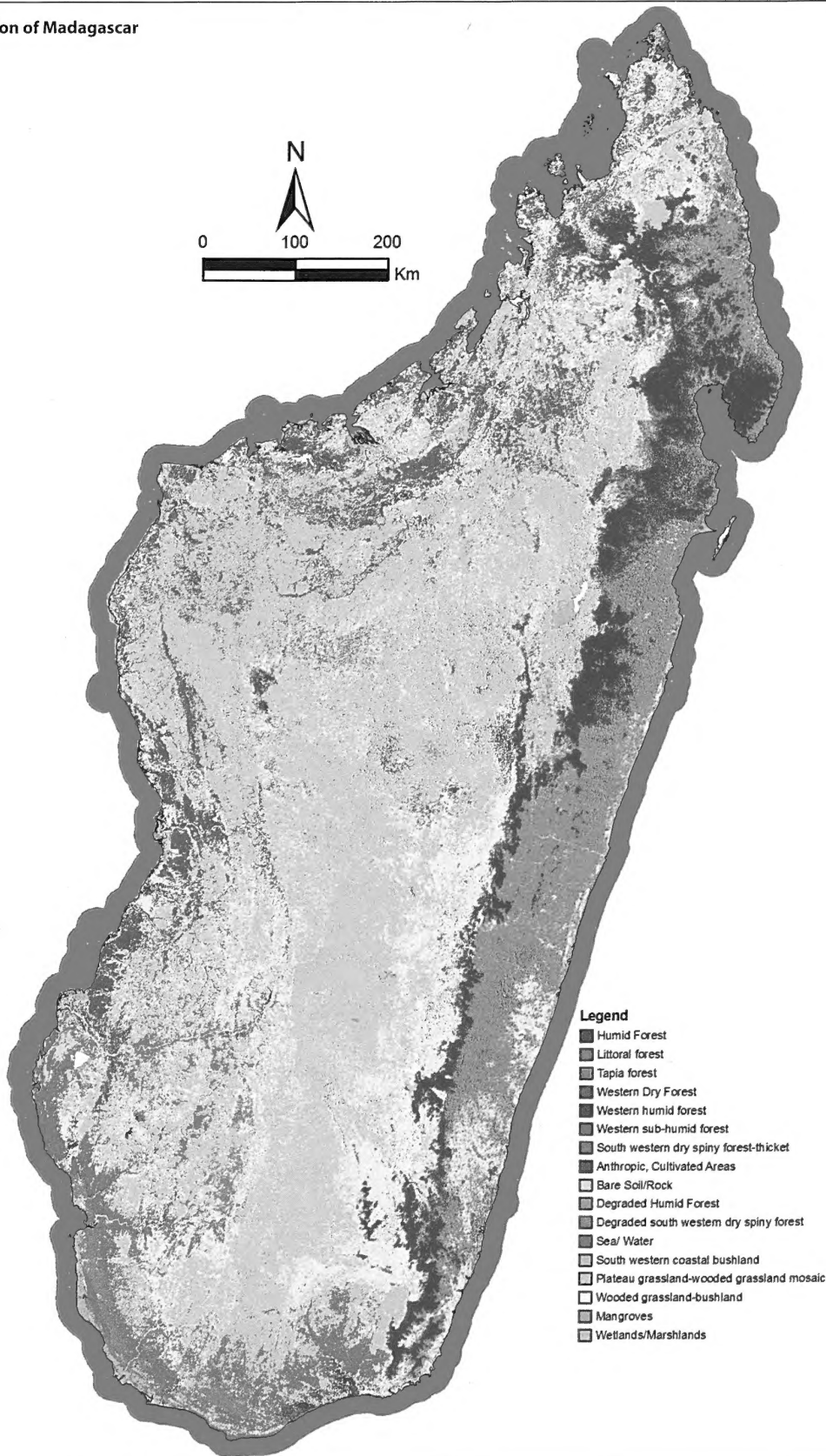


Aeranthus schlechteri

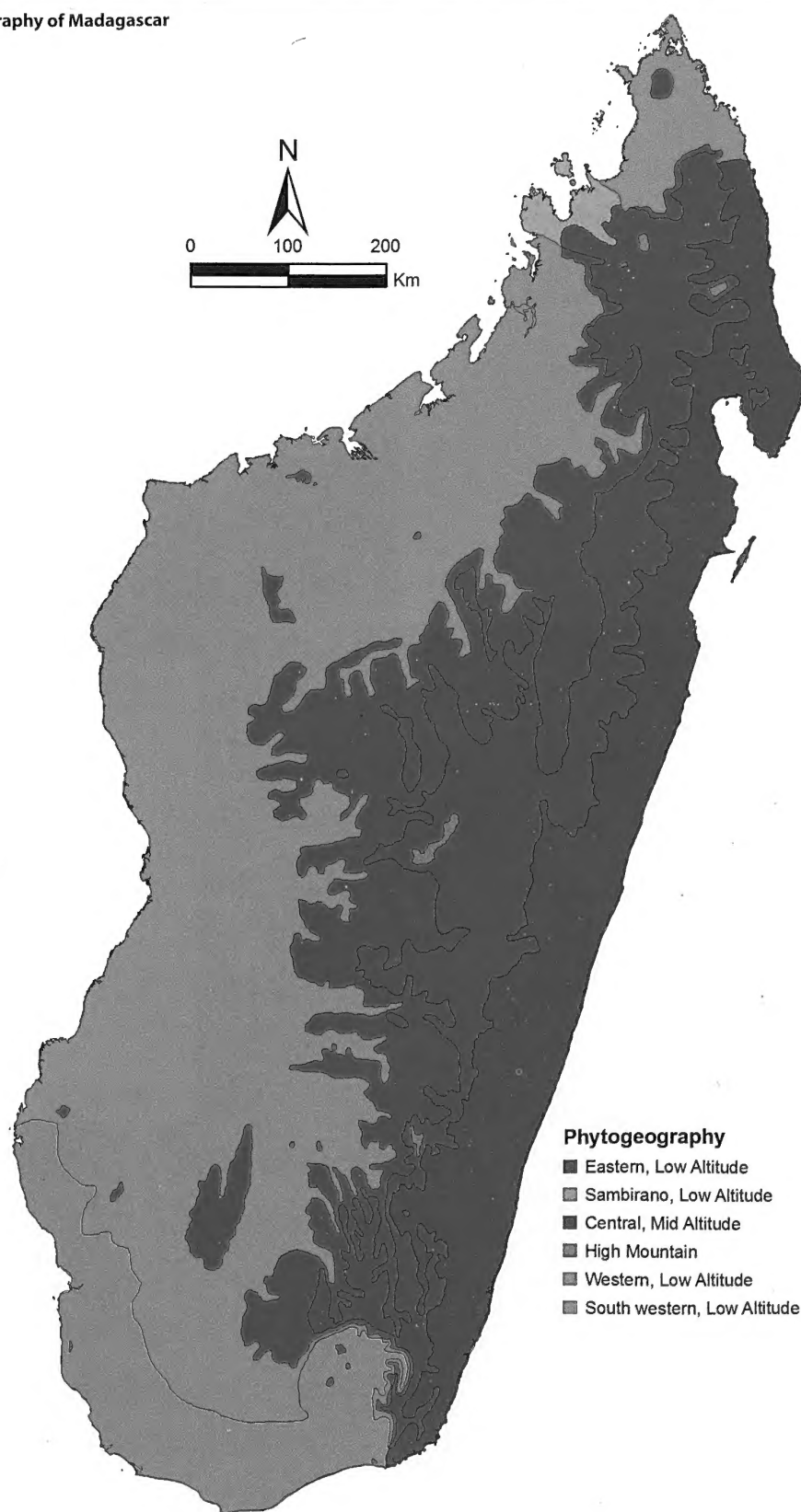


Neobathiea grandidieriana

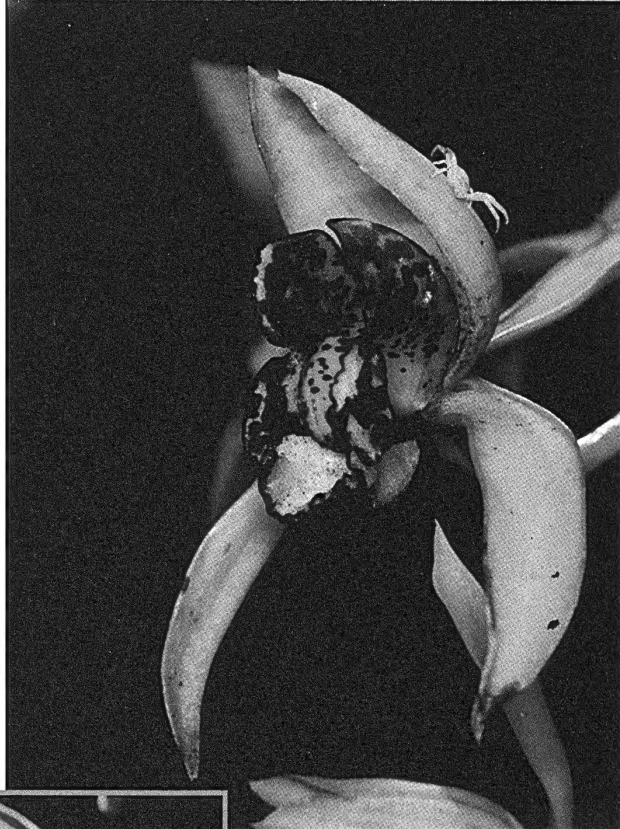
Map 1 Vegetation of Madagascar



Map 2 Phytogeography of Madagascar



Even more dramatic and colourful is the giant *Cymbidiella falcigera*, it has a wide distribution including the north-east and Eastern coastal areas. It is a robust plant with pseudobulbs and leaves easily reaching one metre. The seven centimetre flowers can be produced in great profusion. Sepals and petals are a fresh yellow green. The petals carry almost black spots. The lip is yellow-green with distinctive deep purple, almost black, markings. The species was discovered by Charles Curtis when collecting for the British nursery of Veitch & Co. in 1878. *Cymbidiella falcigera* is one of the most difficult species to grow and flower in cultivation. Its rampant growth and specific habitat seem to defeat most attempts. In the wild the orchid lives exclusively on *Raffia* palms (*Raphia ruffia*). *Raffia* palms can be very tall, the *Cymbidiellas* grow two to five metres up the trunk, with their wiry roots disappearing underneath huge overlapping scaly bracts. There they find a loose fibrous, moist mass, the roots penetrate deeply thus assuring a constant source of moisture and nutrients. *Raffia* prefers marsh-land or very moist ground as a habitat, and grows commonly along paddy-fields and irrigation canals. Temperatures are almost consistently high and the orchids are exposed to direct sunlight most of the day.



Above: *Cymbidiella falcigera*



Left: *Cymbidiella falcigera*

Below: *Cymbidiella falcigera* in the wild





RETINA AUSTRALIA
Retinitis pigmentosa (RP)
 is the major cause of youth blindness!
 If you have RP, or know someone who has,
 please contact the charity/support group
RETINA AUSTRALIA



FIGHTING BLINDNESS
 For information and assistance phone
1800 999 870
www.retinaAustralia.com.au

AOR 025

There are two further species of *Cymbidiella* endemic to Madagascar. *Cymbidiella pardalina* cohabits exclusively with the stag-horn fern *Platycerium madagascariensis* which in turn grows on the tree *Albizia fastigiata*. It is a spectacular species with large flowers and contrasting scarlet and green colouring. *Cymbidiella flabellata* grows on exposed banks of short ericaceous scrub, the roots are embedded in damp sphagnum moss.



Above: *Cymbidiella flabellata*



Cymbidiella pardalina
in the wild



Right: *Cymbidiella flabellata*
in the wild

**World Wide
SPECIES ORCHIDS
Mail Order**

Flasks, Seedlings, Flowering size.

**Burleigh Park
Orchid Nursery**

54 Hammond Way, Thuringowa, 4815.
Ph 0747 740 008

Lists by mail or email:
ian@speciesorchids.com
www.speciesorchids.com

*Propagators of the Rare, Beautiful and
Unusual Orchid Species of the World.
Accredited CITES & Phyto Export*

AOR 013

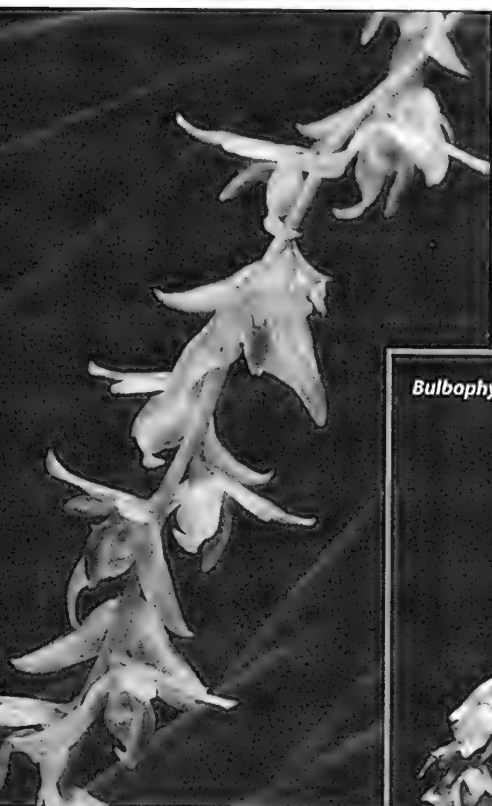
Numerous other orchids inhabit the area, many of them small and horticulturally relatively insignificant. Some of the plants have adapted into succulent or semi-succulent forms. One omnipresent genus is *Bulbophyllum*, the plants and flowers are often small, but their adaptability is astonishing. Some species have pseudo-bulbs only a few millimetres tall, like *Bulbophyllum analamazoatrae*, grow almost completely submerged in surrounding mosses and lichens. The other extreme is *Bulbophyllum hamelinii* with bulbs, including the leaves, easily reaching 50 centimetres. The plants surround large tree-trunks where they produce a raceme of putrid smelling flowers. Other *Bulbophyllum* species like *Bulbophyllum leandrianum* have developed thick needle-like leaves on top of their rounded pseudo-bulbs, its terete leaves are about eight centimetres long, the flowers are small but intricately marked with a pink lip. They are scented of orange blossom. *Bulbophyllum oclusum* can sometimes be found in cultivation, it has thick leaves on flattened pseudobulbs, the flowers are partly hidden by papery bracts. *Bulbophyllum uroplatoides*, described recently, has even more flattened pseudobulbs which virtually disappear against the host tree.



Above:
Bulbophyllum analamazoatrae



Left:
Bulbophyllum hamelinii



Above:
Bulbophyllum leandrianum



Bulbophyllum oclusum



Below:
Bulbophyllum uroplatoides

Some other very colourful treasures of the Eastern forest include *Angraecum rubellum* a twig epiphyte, the flowers are only a few millimetres but the pink colouration makes it very unusual. *Polystachya clareae* with its bright orange flowers is readily identified, it was described fairly recently but is now becoming available as seedlings in the trade.



Polystachya clareae

There are also some very colourful terrestrial orchids in the area like *Gastrorchis*. *Gastrorchis tuberculosa* is one of the most striking, *Gastrorchis pulchra* var. *perrieri* seems to thrive in cultivation and comes from mossy wet areas.

Left:
Gastrorchis tuberculosa



CYMBIDIUMS

Mericlones & Seedlings

Mail Order Specialists Australia-wide
22 Emmett St, Golden Square Vic 3555
Pb: (03) 5442 4806 Mob: 0411 352 036
Email: dkorchids@aunet.com.au
Web: www.dkorchids.com.au

AOR 177

Dark Star Orchids

Bulbophyllums, Dendrochilums, Lycastes,
Stanhopeas, Paphs, Africans and lots more

RARE AND UNUSUAL SPECIES
AND SOME SELECTED HYBRIDS

Please check our newly updated website for our latest releases

Hans Schaible

www.darkstarorchids.com.au

PO Box 114 Bowraville NSW 2449
Telephone/Fax (02) 6564 4088
darkstarorchids@broadnet.com.au

AOR 126

Gastrorchis pulchra

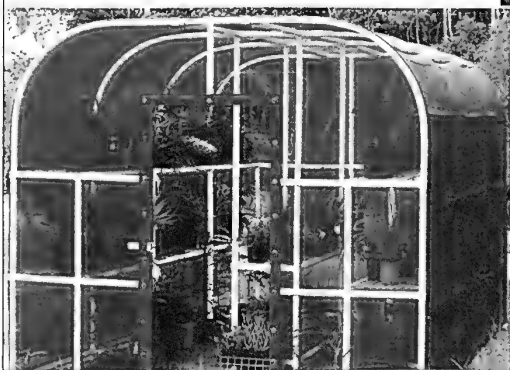




Above: *Gastrorchis pulchra* in the wild

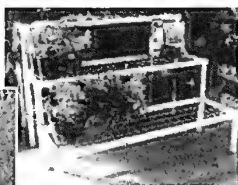
THE PERFECT ORCHID HOUSE

Plant Stands Benches
Custom made ➔



Perfect for your
orchids

Manufacturers of quality shade & hot houses in varying sizes to suit your requirements. Our modular range offers built-in shelving, long life warranty and easy assembly. Perfect for improving flowering.



A U S S I E
SHADE &
HOT HOUSES

Contact your local agent
1300 88 1143
www.aussieshadehouses.com.au

AT LAST - NO ROT NO RUST NO MAINTENANCE

AOR 010



ORCHID SPECIAL A&B FERTILISERS

Food for all Orchid Species
Crystalline — fully water
soluble — especially
manufactured for better
orchids. Rich in 8 essential
mineral trace elements.

ORCHID SPECIAL A (Yellow Compound) 11.13.16

Applied at initiation of flower spikes and continued
through to the end of flowering. The high phosphorus
and potassium and the low nitrogen content stimulates
flowering and ensures a better bloom.

ORCHID SPECIAL B (Blue Compound) 30.4.8

For established plants, applied at completion of
flowering through to initiation of flower spikes. Young
and developing orchids should be fed regularly the
whole year. The high nitrogen stimulates plant growth
and plant vigour. Packed in 500g and 3kg units.
Periodic feeding 15g in 5 litres of water. Regular feeding
2g in 5 litres of water.

*Campbell Orchid Special A&B
Fertilisers "just for good orchids"*

For the name of your local supplier contact:

NSW: Products of Excellence (02) 9417 0277, Beresford
Park Nursery Supplies (02) 4966 5477, Frank Slattery
Orchids (02) 9150 7985. **ACT:** C.I.C. Supplies
(02) 6241 7477. **VIC:** Fertool Distributors (03) 9796 4433.
QLD: Burnell Agencies (07) 3394 2211, J.C. & A.T.
Searle (07) 5497 2022. **WA:** Nurserymens Supplies
(08) 9353 2536. **SA:** Munns Lawn Co. P/L (08) 8277 8000.
NT: Tropigro (08) 8984 3200.

A product of
COLIN CAMPBELL (CHEMICALS) PTY. LTD.

5 Blackfriar Place, Wetherill Park, NSW 2164
Telephone (02) 9725 2544 Fax: (02) 9604 7768
P.O. Box 6789, Wetherill Park, NSW 2164.

AOR 037

One of the highlights of the Madagascar orchid flora are *Cynorkis*, there are about 120 different species, most of them terrestrial but several species can be found growing in moss as true epiphytes like the tiny *Cynorkis peyrotii* others grow lithophytically, one of the finest examples is *C. lowiana* with very large flowers, it grows on dripping rock in deep shade. *Cynorkis calanthoides* is a very impressive epiphyte with a huge leaf which can be up to 60 cm long, it is often attached to the main stem of tall *Pandanus* the tuber looking like a sausage on the side the tree. It has characteristic pale mauve flowers with a white disc on the lip and very large floral bracts. *Physoceras* is very close to *Cynorkis*, the main difference is that the leaf is carried on a long stem. *Physoceras violaceum* grows in thick moss at the base of trees or on lower branches.

There are also a fair number of *Liparis* species to be found in leaf litter on the forest floor, one is *Liparis longicaulis* with a long rectangular stem and flowers that can be up to 3cm.

The Central Highlands

An area between 800 to 2000 metres, encompassing the 'Hauts Plateau' plus technically some isolated mountainous ranges in the north (Montagne d'Ambre) and an area in the south-west (Isalo), the latter will be discussed separately. This region is principally made up of layers of laterite soil with its characteristic red colour. It is not a flat landscape but consists of a complex blend of hills and valleys. A cooler climate persists with considerable seasonal and diurnal differences. Rainfall averages 1500 millimetres, most of it during the summer. Mean temperature in the coldest months range from over 13°C in the east and west down to 5°C in high mountain zones. This area now mainly consists of cultivated valleys, steppe-like grassland and rocky outcrops. Small pockets have retained their primary forest. Characteristic of this area are the Inselbergs, isolated monoliths of smooth

rounded granite. They form islands in the grass plains, their exposed rocky outcrops provide the only habitat for a huge selection of endemic succulents. The following are a few typical orchids from the highland area:

Angraecum compactum was described by Rudolf Schlechter in 1916, the name is slightly confusing as the plants can easily grow up to 30 centimetres, its thick coriaceous leaves are fairly closely spaced on the stem. The scented flowers are very handsome, they are normally produced in pairs. Not including the spur, blooms measure five to seven centimetres. The spur is considerably widened into a triangular shape at the base and reaches ten or so centimetres.

Angraecum linearifolium has leaves that are needle thin; it has very interesting five centimetre peach tinged flowers on a spreading sedge-like plant. The species was first named by Henry Ridley in 1885. In the same group belongs *Angraecum conchoglossum* with its shell-like lip uppermost, it is not to be confused with *Angraecum germinyanum* which comes from the Comoro Islands and is almost completely white. In the trade the names are often confused. Slightly more substantial, but living in the same habitat is the relatively new *Angraecum popowii* described in 1991, its leaves are substantially thicker and the flowers are larger.

An even more recently discovered species is *Angraecum aloifolium*, described in 1997. It grows epiphytically in dry deciduous forest. It has very succulent pitted foliage, the flowers are quite large for the size of the plant at about five centimetres. It is related to *Angraecum leonis* which has flat fan shaped leaf shape. Until recently it was only known from the Comoro Islands. From here it was first introduced into Europe by the Frenchman Léon Humbolt at the end of the last century. The flowers of the Comorean form are larger than those from Madagascar.



Angraecum conchoglossum



Angraecum germinyanum



Angraecum popowii in the wild

Another succulent species is the tiny *Angraecum sesquipedale*, its foliage closely resembles that of some of the species of the genus *Sedum*, the name refers to this characteristic. It grows in deep shade on the side of large trees with its roots shallowly immersed in moss. Its flowers are green and only two centimetres.

Oberonia disticha is one of the few Madagascan orchids with a very wide distribution on mainland Africa, it is one of the most common species seen in the cool central forest. Its foliage, as the name implies, is distichous; short spikes of tiny yellow flowers emerge from between the leaf folds.

Oeonia is one of the most fascinating orchid genera endemic to Madagascar and the Mascarene Islands. *Oeonia rosea* is the most common representative of the genus in cultivation, it is often grown under its incorrect name *Oeonia oncidiflora*. Plants were first brought back from Madagascar by the Reverend Deans Cowan in the 1880's. Cowan was a Scottish Missionary working for the London Missionary Society and one of the first to explore the orchids of the Highlands. He sent numerous plant-specimens together with detailed drawings and observations to Henry Ridley at the British Museum of Natural History. Ridley described a number of new orchids from these, including in 1885 *Oeonia rosea*. The top part of its spindly stem is set with alternating roots and small lanceolate leaves, a seven centimetre flower stem carries up to eight flowers. The blooms are very attractive; good clones can be three centimetres, the petals and sepals are apple green, the rounded bi-lobed lip is crystalline white with a bright red area below the column. Flower shape is variable, going from rather narrow contracted forms with small lobes, to large rounded blooms with clear colours and markings. The species is fairly widespread in the Eastern and Central highlands of Madagascar and also on the Island of Réunion. Its habitat is typified by high rainfall and humidity especially in those places where the original forests remains. There is a drier season from April to September.



Above: *Oeonia rosea* in the wild

PORTABLE HUMIDIFIER

Proven
for Australian
conditions

- 💧 Low water consumption
- 💧 1.5 or 2.5 litres per hour user selectable
- 💧 As portable as the length of your lead
- 💧 Increases humidity
- 💧 Lowers temperature
- 💧 No fine jets to block
- 💧 Cheap to run
- 💧 Mains pressure or tank
- 💧 Float valve controlled
- 💧 Safety cover included
- 💧 Microfine fog
- 💧 240 volt
- 💧 12 months warranty



Suitable for all growing areas

EASY ORCHIDS

\$449

plus freight

Ph: 02 6682 2635

Fax: 02 6682 2605

3 Sussex Street, Woodburn 2472
www.easyorchids.com

NEW AUSTRALIAN ORCHID RESEARCH VOLUME 6

EXPEDITIONS TO CAPE YORK
PENINSULA NORTH QUEENSLAND,
AUSTRALIA 1976 - 1989

Lavarack, P.S. 'Bill' 2011

Have you ever wanted to visit the Cape York Peninsula wilderness to see orchids in their natural environment, but not able to do so? Now you can from the comfort of your home. This new volume in the series **Australian Orchid Research** is an informative record of the many expeditions taken to survey the orchids of Cape York Peninsula from 1976 - 1989. The maps are fully detailed and supported by 68 colour photographs of orchids in situ.

Paperback. 180 pages.

\$40.00 Plus Postage

Visa/Mastercard accepted

Australian Orchid Foundation

P.O. Box 322,
Essendon North, Vic. 3041
Phone/Fax (03) 5627 6303

www.australianorchidfoundation.org.au



Eulophia plantaginea



Eulophia plantaginea
in the wild

From moister and more shaded forest comes the monotypic *Lemurorchis madagascariensis*. It is a very unusual Angraecoid with a densely flowered raceme of flowers. There also are numerous terrestrials in this areas, one of the most common species seen near cultivated land is *Eulophia plantaginea* it is found along streams and has even been reported in drainage

ditches around rice paddies. Some of the most colourful terrestrials are the blue *Disa buchenaviana* which grows in fairly dry grassland and is locally common and *Disa incarnata* grows in the same area but is always seen in boggy ground, it often co-habits with *Satyrium trinerve*. All are extremely difficult to keep in cultivation.



Disa buchenaviana



Disa incarnata

High Mountain areas

There is a very different ecosystem towards the summit of the mountains. Frosts and blizzards have been reported during the early morning hours of the dry season, this period lasts approximately seven to eight months, but mist and dew are common.

This area consists of a number of scattered and isolated mountain ranges, above 2000 metres, but with the highest under 2600m. The mountains are either of volcanic origin or consist of granite. These areas are exposed to great extremes of temperature and seasonal rainfall changes. Climatological data are patchy for the high mountain peaks; anecdotal evidence points towards an exposure to wide fluctuations in temperature, precipitation, humidity and sunlight. The 'wet' season which vaguely coincides with the European winter brings high rainfall and comparatively elevated temperatures for three or so months. Frosts and blizzards have been reported during the early morning hours of the 'dry' season, this period lasts approximately seven to eight months with clear blue skies, but mist, drizzle and dew are common. There also are strong high winds and a great diurnal variation which makes the area virtually sub-alpine. The lower strata of these mountains and of the Inselbergs mentioned above are often associated with Tapia forest (*Uapaca bojeri*), the short gnarled trees form a suitable habitat for numerous epiphytes. Much of the original Tapia forest has now disappeared.

One of the higher mountain ranges is the Ibity Massif, at 2240 metres is the fourth highest area of Madagascar. These granite mountains are not very high by mountaineering standards but the contrast in different habitat and environment are quite remarkable. The following are a few of the orchids typical for the area: *Eulophias*, are often found at the lower altitudes dotted amongst the rocks in grassy pockets of sand and humus. *Eulophia* encompasses species from a variety of habitats and of variable morphology. Species like *Eulophia rutenbergianum* have deciduous foliage and underground tubers, others like *Eulophia reticulata* and *Eulophia pileatus* have prominent pseudobulbs that retain their leaves some of the time. At a slightly higher altitude vegetation gets scarcer



Bulbophyllum baronii

with rock formations and outcrops dominating the scene. Small shrubs and a variety of succulents and sub-alpine plants also clothe the rocks in profusion. It is sometimes difficult to avoid standing on *Pachypodium brevicaule* plants. Every crevice has colourful *Aloe*, *Kalanchoe*, *Senecio* and *Helichrysum* with silvery grey leaves. A fair number of these plants are endemic to the massif.

There also are many orchids; cracks and even rock faces are often filled with little fat-bulbed *Bulbophyllum baronii*, with a typical spiders-web membrane around the base of its bulbs which are often baked to a bright yellow or red. Its flowers are small and insignificant. The roots dig deeply into small pockets of moisture and detritus in-between the rocks.



Bulbophyllum baronii
in the wild



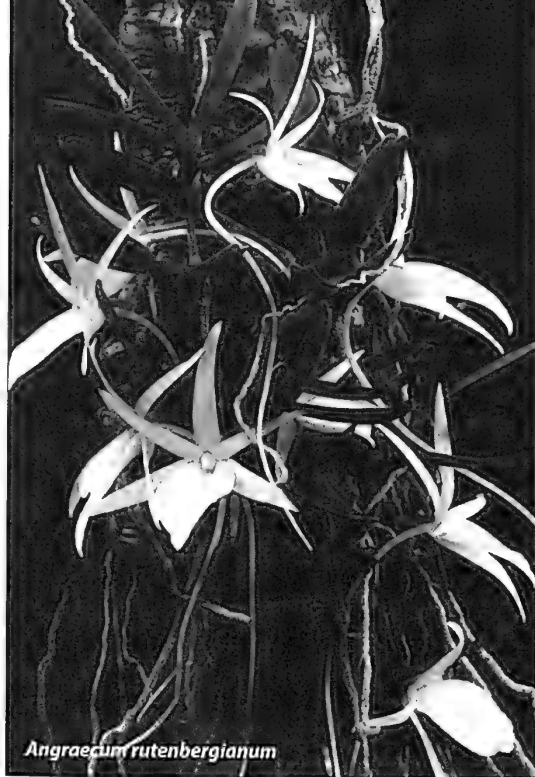
ABN. 13 741 588 428

Signs • Flyers • Advertisements
Brochures • Catalogues • Magazines
• Business Stationery, etc.

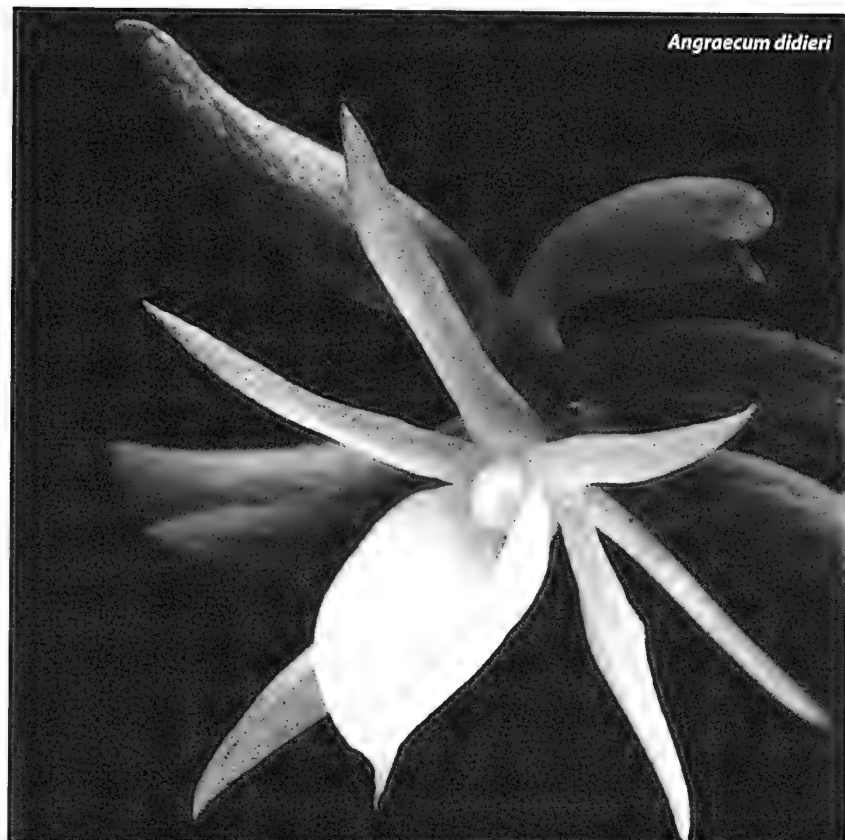
0424 141 637
e rdd@netspace.net.au

In the same crevices are colonies of small and almost succulent plants of *Angraecum rutenbergianum* and *Angraecum didieri*. Flowers of both these species are quite large for the size of the tiny succulent plants. *Jumellea ibityana*, with long palm-like foliage and small crystalline flowers is another typical species for this area.

There also are the larger *Angraecums*. *Angraecum magdalenae* with deep green wrinkled leaves living in small groups, often sheltered by boulders or rock faces. *Angraecum magdalenae* was first described by Rudolf Schlechter and Henri Perrier de la Bathie in 1925, after its earlier discovery by Madeleine Durchud on Mount Ibity. The plants have slightly succulent leaves that grow up to forty centimetres long. Large, white, fleshy flowers emerge on a short stem from beneath the leaf. Plants in the wild are rarely as large as the ones in cultivation, maybe they are collected before reaching maturity, or possibly the harsh climate and habitat keeps them more compact.



Left: *Angraecum rutenbergianum*
in the wild



NATIVE ORCHIDS

Latest Release Seedlings

Flowering Size Plants

Hot/Cold and Cold Growers

**We only stock quality
plants from Australia's
best hybridists**

**Native species including
Dendrobium, *Cymbidium*
and *Sarcochilus***

**LARGE SPECIMENS
AVAILABLE**

**We also stock treefern, slabs,
stakes, pots, sphagnum and
bush moss, orchid bark**

B&T Ferns & Orchids

**30 Wiseman Road
Silvan, Victoria 3795**

**Fax/Phone: (03) 9737 9694
Melway Ref. 123**

Open 7 days a week

Although in this area now quite scarce, *Angraecum sororium* is also very typical for this habitat. The species was first described by Schlechter in 1925 and can grow quite tall, up to one metre, with elongated thin leaves. The flower spike can carry up to three very spectacular, ten centimetre blooms. Plants fully exposed to the elements tend to be a lot smaller than those found in the more sheltered Tapia forest, here the species can form large colonies on the forest floor. It is possible that plants found on the rocky mountain sides are only remnants of larger colonies that once inhabited the original Tapia forest. Plants are notoriously difficult to flower in cultivation.

Other plants that are characteristic are the members of the genus *Polystachya*, like *Bulbophyllum* they grow in humus-rich rock crevices. A few examples are *Polystachya waterlotii* and the more colourful *Polystachya rhodochila* which prefers a more shaded and wooded environment.



Angraecum sororium



Above: *Angraecum sororium* in the wild

Magamp Inline Feeder

Slow release
fertiliser
system



N.P.K.
7.0 17.5 5.0

Great for orchids,
vegies, lawns &
garden plants.

"Gives a little fertiliser
everytime you water"

The Orchid Tray Company

PO Box 767, Sutherland, NSW 1499 Phone 0431 037 372
sales@orchidtrays.com.au www.orchidtrays.com.au

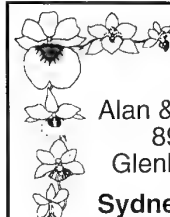
NEW PRODUCTS

- **Anti Scale** – insecticide to control scale, aphids, thrips, caterpillars & other pests.
- **Colloidal Silver** – Main ingredient in Hysan to control fungus & bacteria.
- **Orchid bark mix** – med, large, XL – pre-mixed bark from Tumut, Basalt & Slag from lime furnaces.

Pay via secure website or
cheque to The Orchid Tray
Company, adding postage
as applicable.



Has your
Society booked
the Orchid
Tray Company
to visit in 2012?
We bring a big range
of products & plants
& talk to members
about orchid
growing &
new/old orchid
products.



Miriam Ann Orchids

Alan & Miriam Merriman
89 Levy Street,
Glenbrook NSW 2773

**Sydney's only one
stop Orchid Shop**

We carry a full range of pest and
disease control chemicals suitable
for use on orchids.

The home of Merri Fert and Merri Cote.
We also carry a full range of Port Pots,
Debco Bark, Potting Media and all you
require for your orchids.

**WE ARE PLEASED TO ANNOUNCE THE
RELEASE OF**

Alan's Fertiliser Handbook

2nd edition now available \$22 + p&p
Alan's Pest & Disease Handbook still available
for \$16.50 +p&p.

- Plants, seedlings of most genera in stock.
- Nursery open most weekends or by appointment.
- Closed last weekend of the month.
Please ring before coming

Ph: 02 4739 5141

Fax: 02 4749 8090 Mobile: 0439 514141

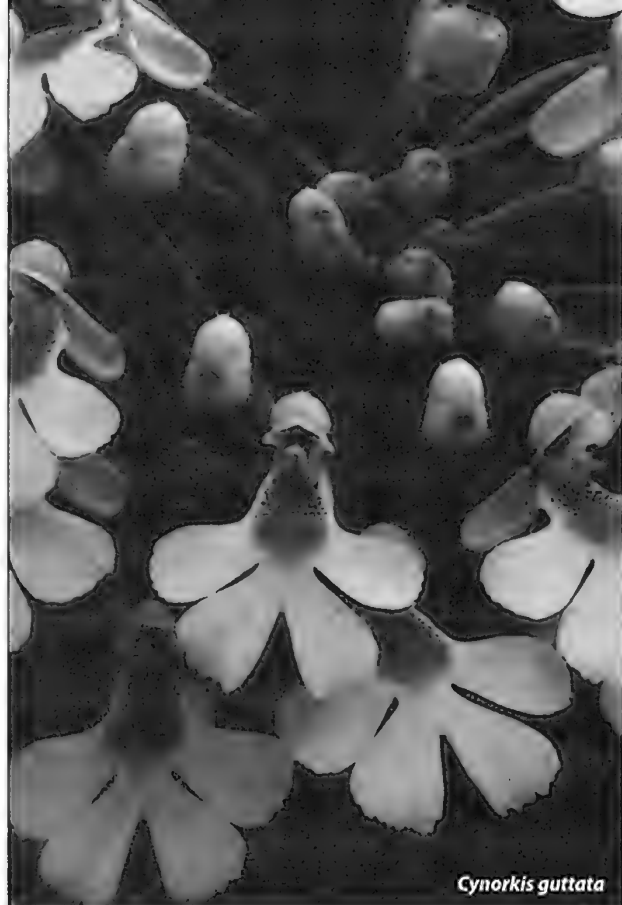
Email: mirannorchids@pnc.com.au

MASTERCARD AND VISA WELCOME

Very different from these epiphytes or lithophytes are the terrestrial members of the genus *Cynorkis*; species like *Cynorkis guttata* and *Cynorkis gibbosa*, both have large succulent leaves that emerge in the beginning of the wet season. They develop very quickly from a fleshy tuber and die down later in the year, their flowers are large and exquisite. The leaves of *Cynorkis gibbosa* are marked with dark maroon spots. In the wild the flower colour always seems to be that much denser than the ones in cultivation. Recently an unusual pale yellow form was discovered.



Cynorkis gibbosa

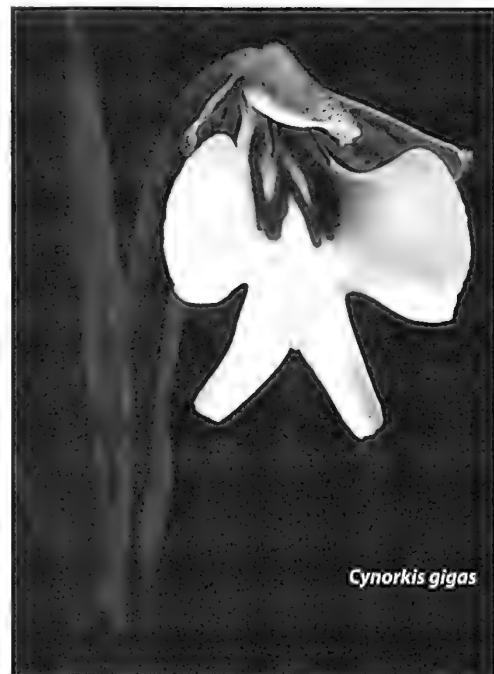


Cynorkis guttata

Even more stunning are the giants of the genus: *Cynorkis uniflora* with flowers about 5 to 6 cm and *Cynorkis gigas* which is about double that size. It is strange that such a large and obvious species was not described until 1924. The inland habitat may explain why it was never encountered by the early explorers who mainly collected in coastal forest. Plants are locally plentiful in a very restricted range of foothills of the Andringitra Massif where it can be found in crevices of quartz or granite rock.



Cynorkis gibbosa
in the wild



Cynorkis gigas

The West

This area faces the Mozambique Channel at elevations from sea level to 800 metres. The climate is warm and fairly dry with major rainfall restricted to a period between November and March. Vegetation comprises deciduous forest and grassland. The western zone receives rainfall only during the wet season with a dramatic reduction from the north to the south ending in areas that receive less than 400mm of precipitation per year.

A certain amount of succulence or drought-beating features are almost essential for orchids to survive in this seasonally harsh climate. Away from the coast a few pockets of forest are left in the steepest valleys, surrounded by a desert of grassland, normally a small reservoir of water or a rivulet provides some atmospheric humidity. This is where species like *Angraecum scottianum* now has been recorded from. The species was until recently only known from the Comoro Islands. It was first described by Reichenbach in 1878 from the Islands and named after Mr. Scott, the first to flower a plant in cultivation. *Angraecum scottianum* is part of a small group of *Angraecum* species with terete foliage and flowers which have a bonnet-like lip structure that dominates the flower. *Angraecum pseudofilicorne* is another member, it is very similar and may well be considered the same species in the future. *Angraecum pseudodidieri* has equally succulent foliage and comes from a similar area.

Another inhabitant of these Western pockets of forest is the untypical *Erasanthe henrici* it is maybe better known as *Aeranthus henrici* the flowers are very large, the spur is long and this makes it different from *Aeranthus*. It was named after Henry Perrier de La Bathie, the great authority on Malagasy plants and the last to publish a comprehensive Orchid flora of the Island in the 1930's. The crab-like flowers of *A. henrici* are about seven to nine centimetres. In nature plants usually are found in exposed positions in semi shade. It can be a difficult species to keep alive in cultivation.

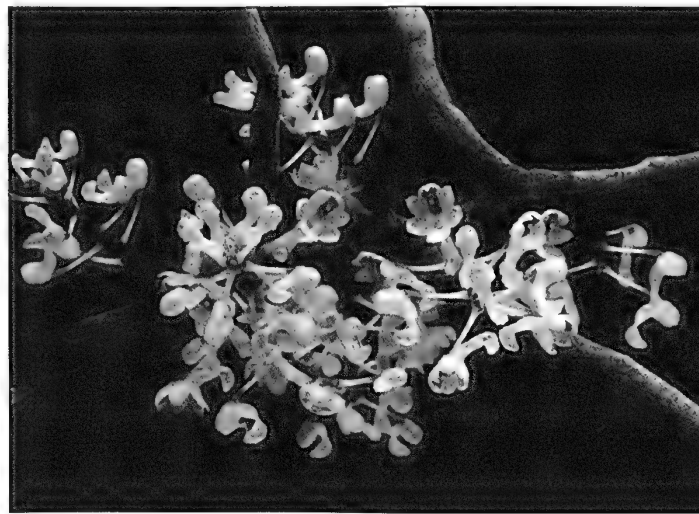


Above: *Microcoelia macrantha*

Leafless orchids also typify the orchid flora of this area. The genus *Microcoelia* is an interesting one, it belongs in the Subtribe *Aerangidinae* and are thus related to *Aerangis*. Leafless orchids are common in a number of tropical and subtropical countries of the Orient, Africa and the Caribbean. In these remarkable plants photosynthesis has been transferred from the leaves to the roots. The root structure is entirely surrounded by a layer of air-filled cells, these retain any available water like a sponge. The roots emerge from a small crown sometimes carrying a few tiny residual scale-like leaf remnants. Leafless orchids from a seasonally dry habitat have some roots anchored firmly to the host tree, others are purely for photosynthesis and for moisture gathering, this is efficiently done during occasional storms or heavy dew.

Some leafless orchids also grow in a more constantly damp rain forest environment of the East, here the plants do not need to be firmly attached to their host, they are loosely attached to twigs and just float about in the canopy. One example is *Microcoelia gilpiniae* which has bright orange flowers. Most Madagascan leafless orchids were historically classified in the genus *Gussonea*, created by Achille Richard in 1828, and *Solenangis* today they are generally all put in *Microcoelia*.

Two of the most commonly seen species from dry forest are *Microcoelia macrantha*, which is endemic to Madagascar, the flowers are relatively large at about one centimetre. It has crystalline white flowers with an emerald-green centre. It comes into flower at the end of the cyclone season. *Microcoelia exilis* is far more cosmopolitan, its distribution covers most of Southern Africa. In Madagascar it is also reported to grow on *Didieraceae* and *Euphorbia* ssp., toward the Southern tip of the Island. The blooms are much smaller than those of the previous species, but the spikes are produced in great profusion from a tangled mass of branching roots. One of the most commonly seen representatives in Madagascar is *Solenangis aphylla* (syn. *Microcoelia aphylla*), with small shell-pink flowers on an extended stem.



Above: *Solenangis aphylla* (syn. *Microcoelia aphylla*)

Isalo & Zombitsi

In the South-west of the Island lies the Isalo massif. This vast range of sandstone rocks have been eroded into a spectacular landscape reminiscent of parts of the south-western United States. The Massif is dissected by several very tall and narrow canyons. These provide a moist micro-climate with its own characteristic flora and fauna. *Bulbophyllum bicoloratum* is one of the few epiphytes to survive here, the flowers are not large and are protected in a cocoon of large bracts that only leave a small opening for any pollinating insects to enter. The Massif itself is the home of numerous succulents like *Pachypodium* and *Aloe*. Pockets of sand contain a number of deciduous terrestrial orchids, like the bright yellow *Cynorkis flexuosa*. This species is widespread in Madagascar but in Isalo plants tend to be more compact, the leaves are smaller and thicker and the red colouration in the back of the lip is less pronounced than in the Central Plateau form.

Further towards the coast are the remnants of the once vast Zombitsi forest. It is an important example of a boundary forest zone between the western and southern vegetative areas. It contains a fascinating mixture of seasonally dry deciduous forest and an under-story of dense, often semi-succulent scrub. The soil is very sandy and the climate is dry with precipitation under 750 millimetres per year.

Its orchid flora overlaps both with the Isalo Massif and the dry south-west. Terrestrially, in the sandy soil, are *Oeceoclades*, a genus of 30 species with two thirds of these in Madagascar. The genus is closely related to *Eulophia* with some overlap of characteristics. Both flowers and plants are fascinating, the leaves of some species are exquisitely patterned. One of the



Cynorkis flexuosa



ADELAIDE
Orchids

CALL: 1300 ORCHID
CALLS WITHIN AUSTRALIA ONLY 1300 672443

"Producing Tomorrows Champions Today"





Specialising in
Cymbidiums, Paphiopedilums and Zygopetalums
Flasks and Plants

www.adelaideorchids.com

1300ORCHID
enquiries@adelaideorchids.com

PO Box 1091
Flinders Park
SA 5025

most attractive is *Oeceoclades spathulifera*, first described in 1935 by Perrier de la Bathie; it grows in seasonally dry deciduous woodland in sandy soil and leaf litter. The flowers are carried on a tall one metre spike, the lip is four lobed and richly veined with red, the sepals are spatulate. The leaves are its most attractive attribute; they are richly marked with reddish-brown, deep green and pale cream forming a snake-skin pattern. *Oeceoclades petiolata* is quite different; it has leathery leaves on a long stalk. The flowers are only one centimetre with a wide white lip and pink purple marking.

Epiphytes are scarce here; *Angraecum praestans* grows in the crown of small trees or tall scrub. From the base of the thick sickle shaped foliage emerge eight centimetre flowers with an extended funnel shaped spur. *Lemurella culicifera* is a much more diminutive species, it grows on the main stem of small trees. The leaves are small but a large root-mass takes care of water storage. The flowers are peculiar with the margins of the lip surrounding the column, this is one of the key characteristics of the genus *Lemurella*.

In the same area a more succulent form of *Erasanthe henrici* (syn. *Aeranthes henrici*), the variety *isaloesis* grows, it was described in 1941 by Perrier de la Bathie. It has smaller flowers than the plants seen in Western forest. Unfortunately the variety was not described validly by Perrier and does not officially exist. Another local variant is *Grammangis spectabilis*, which is closely related to *Grammangis ellisii* of the east, it was described in 1969 and now virtually extinct. Differences include its slightly smaller flowers, an oblong median lobe and yellow-pink more pockmarked sepals.



Grammangis spectabilis



Grammangis ellisii

ARANBEEM ORCHIDS

Mail Order Specialists Australia Wide
(Except Western Australia/Tasmania)

NEW LISTINGS AVAILABLE NOW

Priests Road (PO Box 96)
Deception Bay, Brisbane, Qld 4508
Ph (07) 3888 3637 Fax (07) 3888 5271
Email: aranbeem@bigpond.net.au

Nursery Open: Saturday - 9am-4pm
Phone/Mail Orders: Mon-Sat - 9am-4pm
Other times by appointment



TINONEE ORCHIDS 2012 DIARY

Delve into the World of Orchids in 2012

Tinonee Orchids will be at the following shows and Orchid events.

Feb 26 Hills District Orchids - Autumn Open Day
Mar 2-3 Queensland International Orchid Fair - Bray Park
Mar 10 Bellingen Plant Fair - Bellingen
Apr 13-14 Sydney International Orchid Fair - Castle Hill
May 11-13 Mothers Day Weekend Spectacular - Port Macquarie
May 25-27 Orchids Out West - Hawkesbury NSW
Jun 1-3 Orchids In Paradise - Southport
Jun 23-24 Mingara Orchid Fair
Jul 8 **TINONEE ORCHIDS OPEN DAY & SHOW**
Jul 29 Hills District Orchids - Winter Open Day
Aug 10-12 National Orchid Extravaganza - Dural
Aug 17-19 St. Ives Orchid Fair
Aug 24-26 Melbourne Orchid Spectacular & Victorian International
Orchid Fair Springers, Keysborough
Sep 1-2 Speciosum Spectacular - Kempsey
Sep 13-16 Australian Springtime Flora Festival - Mt Penang
Sep 14-16 Aust. Orchid Council - Conference & Show - Perth
Sep 23 Hills District Orchids - Spring Open Day
Oct 5-7 Southern Orchid Spectacular - Cronulla
Nov 3-4 Gold Coast - Tweed Orchid Fair
Dec 2 Hills District Orchids - Summer Open Day

TINONEE ORCHID NURSERY

768 Tinonee Road, Tinonee, 2430
Phone: (02) 6553 1012

www.tinoneeorchids.com
orchids@tinoneeorchids.com

Ersanthe henrici
(syn. *Aeranthus henrici*)



The South

The extreme south and SW have an average rainfall of 700mm or less, the driest parts do not even get 300 mm, the climate is arid and hot, the average annual temperature is a maximum of 30 to 33°C, a minimum of 15-21°C.

The area consists of plains between 200-400 metres. The climate is hot and rainfall is sporadic, one of the key environments is the Spiny Forest. This type of vegetation is specific to South and Western Madagascar. At first sight, especially during the dry season, the area may appear desert-like with sandy tracks and very little obvious green vegetation. Tree Euphorbia's, Baobabs, *Pachypodium* and the endemic *Didiereaceae* make up a unique succulent forest. Up to 10 metres high *Didieras* and *Alluaudias* create a very impressive forest of snake like fingers baking in the sun. There also are a number of leaf succulents such as *Kalanchoe* and *Aloe*. Huge Sisal plantations were carved out of the forest many years ago.

This is also the home of the Rosy Periwinkle (*Catharanthus roseus*) a relatively common plant in verges. The potent alkaloids in the bush form the basis for two important drugs, Vincristine and Vinblastine, which can now treat childhood leukaemia successfully. Because of the very limited leaf cover, hardly any shade is available. Daytime temperatures can reach well over 35°C. and rarely drops below 15°C. Rainfall is relatively high during December, January, February and March, the rest of the year precipitation is considerably lower. During some years there can be no rain at all.

This habitat may seem an unlikely area for orchids, however at the base of this strange vegetation, in the baking sunshine, the beautiful *Sobennikoffia humbertiana* grows. The species was named after the French botanist Henry Humbert who first discovered the plant in the late 1930's. The genus is closely related to *Angraecum* but different enough for Schlechter to name the new group after his wife's maiden name.

Plants grow into fairly large specimens, the typical Angraecoid leaves can reach up to twenty to thirty centimetres. The roots are very thick and long and are entwined with the surrounding spiny vegetation. The flowers are truly astonishing; their substance makes them look as if they were carved from wax. The raceme contains seven or so flowers measuring about four centimetres each. The pointed sepals and petals are pale green, fading to cream with age and surround a fairly large lip. The flowers are scented and very long lasting. *Sobennikoffia robusta* is similar in overall appearance but differs by the length of its spur and lip shape.

In the same sun-baked area there also is *Vanilla decaryana*. This native species has a totally leafless stem with thin, groping aerial roots along its centimetre thick snake-like length. The main root system, nearer the base of the plant is more substantial than the aerial roots and disappears in the sandy soil, reaching for any available moisture, to a considerable depth. The *Vanilla* stems can be bright red, from constant exposure to bright sunlight. *Vanilla perrieri* grows in a similar habitat, the bright yellow flowers are even more striking but sadly only last for one day.



Sobennikoffia humbertiana



Vanilla perrieri



Sobennikoffia robusta

Another inhabitant of the spiny forest is *Aerangis decaryana*, which is occasionally seen on *Alluaudia procera*. More commonly it can be found on the paper barked tree *Euphorbias* and also more commonly on Tamarind trees where a little dappled shade is available. Its crinkled succulent foliage and pink tainted bird-like flowers are typical. The roots are flattened and can reach out for several metres.

The genus *Oeceoclades* is mainly found here and shows a fascinating array of shape and colour of plant: species like *Oeceoclades spathulifera* and *Oeceoclades boinensis* have not just interesting flowers but also very intricately patterned leaves. One of the most common in the south and south-west is *Oeceoclades decaryana*. The flowers emerge from a tall stem and are intricate but not sensational. The superb green / cream and brown markings on the leaf are interesting in themselves. Plants grow in coarse sandy soil with the pseudobulbs partly submerged. The patterning seems to act as a camouflage, with plants blending in astonishingly with the surrounding vegetation. This patterning may also act as a protection from the harshly bright conditions. *Oeceoclades calcarata* is a far larger species with 10 centimetre pseudo-bulbs and thick leathery leaves. The flower spike, which is branched, can grow up to 1 to 2 metres tall.

Slightly overlapping with the eastern area is the coastal forest of the South; a maritime climate produced an intermediary zone where the spiny desert mixes with slightly more tropical forest.

The Comet Orchid, *Angraecum sesquipedale*, is one of the most striking; it flowers from June to November. Individual flowers can be almost 26 centimetres across and over 30 centimetres long, including its long nectary spur at the back of the flower. Although more common on the Eastern coast, in the South it is represented as *Angraecum sesquipedale* var. *angustifolium*, recognised by some as separate species *Angraecum bosseri*. Its leaves and growth form is squatter, its leaves are thicker, the flowers tend to be smaller. The plants often seem to grow terrestrially or semi-terrestrially.

Cynorkis villosa is a fascinating Southern representative of this large genus, the leaves are thick and deciduous, the flowers extraordinarily hairy, possibly an aid to pollination, possible to aid water retention during the short flowering season.

*Aerangis
decaryana*



*Angraecum
sesquipedale*

ORCHIDACEOUS BOOKS

Suppliers of Fine Orchid Literature

**Large selection of new and
pre-owned orchid books**

Browse and shop at our secure website
www.orchidaceousbooks.com.au

*We attend orchid fairs in
Brisbane, Sydney and Melbourne*

Grahame & Margaret Muller
P.O. Box 4192, Tinana, Qld. 4650
Ph: 07 4122 1251 Fax: 07 4122 4539
Email: books@orchidaceousbooks.com.au



Above: *Paralophia epiphytica*

Another interesting inhabitant of the wetter areas of the South is *Paralophia epiphytica* has an interesting history; fragments of evidence of the existence of this unusual epiphyte go back to the 1970's. The horticulturalist Marcel Lecoufle found two epiphytes with *Eulophia*-like flowers growing on palm trees in the vicinity of Tôlanaro. One was identified as *Eulophia palmicola*, which had been described by the Perrier de la Bâthie in 1935. The other was left with Jean Bosser at the Herbarium of the Natural History Muséum in Paris who recognised it as a possible new species, unfortunately insufficient herbarium material was available and it was decided to await further evidence. In 1994 we found large colonies of the beautifully scented epiphyte in full flower in cultivated oil palms next to a swampy area of *Raphia* palms near Tôlanaro, the next year a group of botanists from the Royal Botanic Gardens, Kew visited the same site, herbarium and a living collections were made and the latter flowered at Kew in May 2001. With good herbarium material available it was then described it as *Eulophia epiphytica*. Based on molecular study it was recently placed in its own genus and is now known as *Paralophia epiphytica*.

The North

The northern part of the Island is characterised by its variety of topography, with high mountain peaks and coastal plains. Its climate is similar to that of the East except for a much drier pocket at its northern tip.

One of the most fascinating succulent-rich habitats are the incredible limestone pinnacle karsts, known locally as Tsingy, because of the resounding noise it makes when struck. This geological formation was created by the eroding effect of water on soft limestone. The best known Tsingy are Bemarah in the west and Ankarana in the North. The Ankarana reserve covers a relatively small area, approximately 30 kilometres by eight at its widest, but its network of caves, sheer rock-faces and canyons make it seem like an endless massif rising out of the ground. Different plant habitats are spread over the area, ranging from semi-desert and jagged limestone outcrops to much cooler tropical forest in the canyons. It also is a very hostile environment; its beautifully fluted, razor thin ridges and pinnacles can cause considerable damage to any body part coming in contact with it. The high walls of unstable rock and open cast stalactites are virtually unconquerable. A walk through the Tsingy is unforgettable, dwarf succulent Euphorbias are intermingled with sharp grasses and gnarled shrubs, the ground can be like a miniature moonscape interspersed with ridges of razor sharp limestone rock.

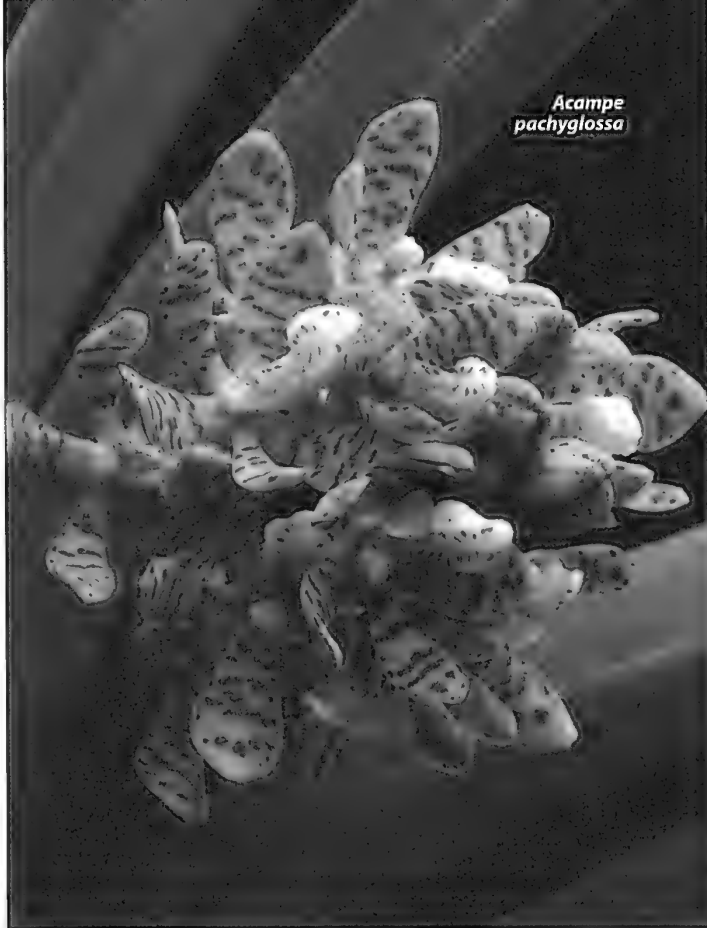
Paralophia palmicola



Orchids are not common in this area; *Acampe pachyglossa* grows on the main stem of short forest trees, it is one of the species with a very large distribution covering tropical Asia and Africa. In common with other cosmopolitan plants it has acquired a number of different species names, varieties and subspecies; *Acampe pachyglossa*, *A. renschiana*, *A. pachyglossa* ssp. *renschiana* are all one and the same thing. The inflorescence is densely clustered with fleshy two centimetre flowers.

More inland, and often on trees in plantations one finds *Graphorkis concolor* var. *alphabetica*, also known as *Graphorkis scripta*. The plant has very substantial pseudobulbs that lose their leaves at the beginning of the dry season, leaving behind several vicious remnant spines on the top of the bulb, this presumably deters animals that would be tempted by the succulent bulbs. This phenomenon is also seen in the South American *Lycastes* and *Catasetums*. The roots of the *Graphorkis* consist of two types, one attaches itself onto the host tree, the others form an upright semi-crown that collects and falling debris, this provides the plant with its own compost heap. The flowers are about a centimetre and vary greatly in colour and patterning. The Madagascan form is yellow with dark chocolate blotches on the petals and sepals. A form with entirely yellow flowers occurs on La Réunion.

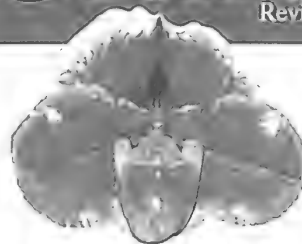
Towards the coast, there are a few mountainous outcrops; this is the habitat of several unusual species like *Oeceoclades gracillima* (incorporating *O. roseovariegata*), the plant can be grown for its very decorative foliage alone, especially as the flowers are fairly insignificant. Plants grow in stony ground in mountainous outcrops almost on the extreme northern point of the Island.



Graphorkis concolor



Australian Orchid Review



WELCOMES EDITORIAL CONTRIBUTIONS

Please ensure that all slides, photographs and electronic files are clearly marked with the author's name and address

Address editorial to:

David P. Banks (Editor)
Australian Orchid Review
39 Carole Street, Seven Hills
NSW 2147 AUSTRALIA

Email:

david@hillsdistrictorchids.com

AOR 015

Conservation

Forest destruction is not new to Madagascar, at the end of the last century the Reverend Richard Baron reported in 1889 that: "it is grievous to relate, however, that the forest of Madagascar are being destroyed in the most ruthless and wholesale manner by the natives. Every year thousands of acres of country are cleared, the trees being burned to the ground, and that for no other purpose than to provide ashes as manure for a mere handful or two of beans, or a few cobs of Indian corn, or a little rice to be grown in the clearing". Destruction of habitats goes on relentlessly and there is now very little left. Notwithstanding the commitment by the Madagascar government and NGOs to its natural resources, there is little doubt that much of the Island's unique flora and fauna are under threat. The main encroachment comes from agriculture and fires running out of control from grass burning to stimulate new growth. These fires are almost essential for the survival of the large herds of cattle which are so important to Malagasy culture. Other threats are from logging, gathering for fuel, mining and to some extent collecting of desirable species, a few orchids are also harvested for medicinal purposes like *Vanilla madagascariensis* and some *Eulophia* & *Cynorkis* species. There is only limited information available on the conservation status of the orchids on the Island, as a consequence there has been little systematic conservation planning. Several major projects by the Royal Botanic Gardens Kew in collaboration with international partners are trying to address this.

Very little propagation of orchids has taken place in Madagascar up till now. A collaborative propagation project between the Royal Botanic Gardens, Kew and the Parc de Tsimbazaza Botanical Garden in Madagascar aims to reduce the demand for wild collected plants, and to generate much-needed income through propagation of the native orchids.

Cultivation of Epiphytes

Madagascan epiphytes and lithophytes cover an almost full range of climates and habitats all requiring a different culture regime. Even within one species one can find distinct forms from moist evergreen forest, exposed rock to virtual desert, *Aerangis ellisii*, *Angraecum sesquipedale* and *A. eburneum* are just a few examples. Other species have evolved on different islands and will require different environments in cultivation; *Angraecum leonis*, for example, from the Comoro Islands needs warmth and humidity whilst those from Madagascar will thrive in a drier atmosphere.

As for all orchids light, humidity and temperature should be in a correct balance. Equilibrium between these different conditions, at the right time is the key to success and flowering. As a rule, most tropical and sub-tropical orchids survive in a buoyant intermediate to warm atmosphere; dry cold is more easily tolerated than damp cold, warmth with gentle air movement are more conducive to good growth than stifling heat. In the wild most species in our group will experience changing temperatures daily. Temperatures begin to rise just before sunrise, reaching its highest figure by midday and decreasing at sunset to its lowest figure in the early hours of the morning. Leaf temperature will be directly affected by this; if it is too high growth stops. Most orchids are adaptable, within limits, and can adjust to the conditions provided. Prolonged periods of too low a temperature will mean plants will not thrive and eventually perish. Too low a temperature and too little light also make it easier for fungal rot to take hold on soft wet foliage; this also will mean the sudden demise of the plant.

Vanilla madagascariensis



One of the most important features of all is the daytime lift of temperatures, a difference of 5°C to 12°C between the minimum night and maximum day temperature is often required. Early in the morning and late in the afternoon and on cloudy days when the sun is obscured, light is greatly reduced. This is often accompanied, in the wild, by lower temperatures and mist or heavy rain. Some species, like those in *Sobennikoffia*, from harsh, desert-like areas, need to be grown as almost pure succulents with little water and constant exposure to high light levels.

The right amount and balance of light is very important. In some genera almost all species are shade lovers. For example, virtually all *Aerangis* and *Aeranthes* species grow best in well-shaded places. *Angraecum* and *Jumellea* have many species that can be found in full sun but others in deep shade. Many species have a distinct flowering season in the wild; this is often related to shorter or longer days, or to the onset of the rainy season or to a combination of both.

Flower initiation is also influenced by a seasonal drop in temperature. Inflorescences of many species can take several months to develop. Some can be reluctant to flower in cultivation, often a boost in light levels or a drop in temperature can achieve the initiation of buds; some lithophytic species of *Jumellea* and *Angraecum sororium* are just a few troublesome examples.

Maintaining a fresh and moving atmosphere around the plants is essential. In the wild air movement is constant. A gentle breeze is normal and strong winds not uncommon. Ventilation through air-vents in a glasshouse is usually not sufficient to provide this level of air movement for plants; an additional source of movement from fans or cooling apparatus are often necessary to keep leaf temperature down. Additional humidity will also be necessary during the warmer summer months and during the winter when artificial heat decreases

humidity levels. Some humidifier and misting devices increase air movement which can be beneficial to the plants. Stagnant humid air should be avoided at all times, especially at night; bacterial or fungal infections can set in very rapidly. The usual orchid pests and diseases will attack these epiphytes. Leaf burn and fungal rot can be problematic, especially as the leaves remain on plants for many years. Good air movement and preventive hygiene measures in the glasshouse will normally be sufficient. Fresh root tips and new growth tips are particularly vulnerable to slugs and snails.

Most Madagascan epiphytes can be grown in an open compost mix in clay or plastic pots. Others thrive in the more open conditions of wooden slatted basket, filled with a mixture of moss, fibre or other materials. The rampant aerial roots of many Angraecoids need plenty of space; they also need conditions to drain quickly and to dry out between watering.

Many of the plants grow well in cultivation in the natural way; clinging to a piece of cork bark, fibre or suitable wood. The plants are tied tightly to the host with nylon fishing line or some other durable material, a small pad of moss or other water-retentive material can be incorporated. This method leaves free rain for the often great quantities of aerial roots. The mounted plants can be sprayed or dunked when they become dehydrated. This type of cultivation is essential for twig epiphytes like *Lemurella*, *Microcoelia* and many of the smaller Angraecoids; slices of cork or twigs will make an ideal mount.

In general water should drain quickly, and dry periods between successive watering will imitate the growing conditions of many species and promote healthy growth. Plants in our group often grow slowly, so they will need only small quantities of dilute fertiliser during the growing season. After flowering the rate of growth commonly slows down and stops altogether in the dry season when there is sometimes a partial leaf fall. At this stage light can be increased a little and water decreased.

Cultivation of Terrestrials

Growing and flowering Madagascan terrestrial orchids can be even more problematic. Just one small mistake in the growing / resting regime will mean the demise of the plant; some *Cynorkis* and *Disa* are particularly vulnerable in this way.

Some of the warm and dry growing pseudobulbous plants like *Oeceoclades* can be surprisingly easily grown and flowered. Plants are potted in a free-draining compost of sand, Perlite, gravel and a little organic matter like peat, fine fir bark or leaf mould. During active growth water is given regularly, while resting, when the pseudobulbs have been completed, water

is withheld. During this period, which can last for several months, bulbs and leaves need to be kept plump by gently spraying with a fine mist of water on the surface of the compost. Alternatively, plants can be potted in clay pots and plunged to the rim in a mixture of gravel and sand. If this plunge-bed is kept moist it will form an ideal buffer to stop the plant from desiccating and meanwhile reducing the risk of rotting the plants through overwatering. If a particular species needs a more severe rest from moisture the pot is raised out of the grit to ensure speedier drying. Many should be grown in a very bright spot of the warm greenhouse, only during the height of the summer will it be necessary to apply some shading to the glass, in the wild light levels between 30.000 and 50.000 lux have been recorded. During the hottest part of the year ample ventilation should be allowed, combined with adequate damping down during the day.

Further Reading:

Cribb & Hermans (2009) *Field Guide to the Orchids of Madagascar*, Royal Botanic Gardens Kew. With short descriptions, keys and numerous illustrations.

Hermans et al (2007) *Orchids of Madagascar*, Second edition, Royal Botanic Gardens, Kew. Contains a complete checklist and bibliography of the orchids of Madagascar, many of them illustrated.

Stewart & Hermans (2004) *Angraecoid Orchids*, Timber Press. Portland.



(Dr. Johan Hermans is Chairman of the Royal Horticultural Society (RHS) Orchid Committee and the Advisory Committee on Orchid Hybrid Registration. He is a World Orchid Conference Trustee and an Honorary Research Associate of the Royal Botanic Gardens Kew. He has a special interest in the Orchids of Madagascar. Johan is one of the keynote speakers at the upcoming 19th Australian Orchid Conference & Show, being held in Perth, Western Australia from 11-16 September 2012).

Johan Hermans
Middlesex, England, UK
Email: orchids1@btinternet.com



Cedarvale Orchids

Specialist breeders of Australian Native Orchid Species and Hybrids

2011-2012 CATALOGUE NOW AVAILABLE

Send SAE for your free copy

Ross & Rhonda Harvey
16 Heather-Anne Drive, DRAPER QLD 4520
Telephone: (07) 3289 1953
email: cedarvaleorchids@cedarvaleorchids.com
www.cedarvaleorchids.com

"Nicky's Slippers"

One of the world's leading Paph. breeders.

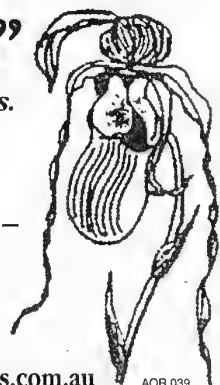
Exciting new Paphs. and Phrags. now available.

Contact us for a copy of our colour catalogue – send 3 x 60c stamps

NICKY ZURCHER

Box 326, Virginia, South Australia 5120

Phone/Fax (08) 8380 9360 Website www.nickyslippers.com.au



AOR 039

Cymbidium erythrostylum



The Kimberley Connection: The Peter Sunderland and Kimberley Orchids Story

Text by Geoff Bailey, photos by Terry Poulton

I had always wondered where the name Kimberley Orchids came from. It was only recently on a cold winter's day in Melbourne while chatting to Peter Sunderland, the owner of Kimberley Orchids, that I learned of its origin. Peter's grandfather was one of a group of drovers, the first white men to drive sheep into the Kimberley Ranges, Western Australia – the family business was named in honour of this remarkable feat.

To be honest I'm not sure why anyone would even attempt this, the countryside although breathtakingly beautiful at times, is hardly the type of land you graze sheep on to fatten them up. It would be akin to trying to grow a magnificent show bench *Cymbidium* orchid in dry, red sand – maybe it would work; but this is something that Peter has not had to worry about as he has perfected the method of producing stunning show bench, cut flower and pot-plant type cymbidiums. There are many hobby and commercial growers throughout Australia enjoying the fruits of this little master's hybridising program.

Peter first became interested in orchids in his early twenties when he assisted his mother in looking after a small collection of plants. Peter is a bricklayer by trade and his building skills are evident in the many well built but simply constructed growing and flowering houses neatly placed on his small acreage property.

Neat is the appropriate term when talking about Kimberley Orchids. I have visited Kimberley Orchids several times over the years and it is rare to see anything out of place. The lush grass between the houses is always neatly cut and trimmed and the pathways in the houses are always raked and free of on any debris. This is not any easy task in even a small orchid house but with over an acre of plants under cover it reflects the family's approach to growing orchids – everything has a place and everything must be in its place. I say family because this really is a family business – Joyce, Peter's wife of nearly 60 years, and his daughter Jenny work side-by-side in maintaining their fabulous collection of plants.

It is not all that many years ago that 'all' you could expect to see at Kimberley Orchids were large flowered standard cymbidiums; but on my last visit at the end of July, I was amazed to see just how many intermediate and miniature plants Joyce had managed to 'sneak' into the collection. This is a regular source of amusement at the Cymbidium Orchid Society of Victoria monthly meetings that whenever an intermediate or miniature cymbidium is benched under the Kimberley name, we know only too well that it belongs to Joyce. One of Joyce's plants, a beautiful example of *Cymbidium erythrostylum*, can be seen on COSV's website (<http://cosv.com.au>) under the Monthly Meetings 2010 – July album.

Peter and his family have been at their current site for the past nineteen years having purchased the property from the

proprietor of Lazy Possum Orchid Nursery. The family business is in Devon Meadows, approximately 50kms south east of Melbourne. Interstate visitors are always most welcome to visit provided they have rung to make an appointment.

Prior to setting up at Devon Meadows, Peter commenced his orchid growing business in Burwood. In those early days, Peter has now been growing orchids for many decades; he established his collection with back bulb propagations, and as it turned out many virused plants. Those days have long gone with Peter ensuring that his collection is now 'clean' and healthy. Like all orchid growers he does experience the occasional problems with scale and two spotted mites (red spider), but these are dealt with immediately when they appear. Rather than rely solely on sprays Peter regularly introduces predatory mites into his collection. He believes that they are 60% - 65% effective.

Kimberley Orchids has earned its reputation for producing top quality, large flowered standard cymbidiums. With over sixty registrations and a similar number of awards, Peter and his family should feel very satisfied with the results of their hybridising program. Genealogy charts and family trees are pushed to one side when it comes to hybridising, with Peter relying on his vast knowledge to determine whether or not the pairing of two flowers will produce desirable progeny. It is hard to argue against this approach as everywhere you look you are surrounded by magnificent blooms. Peter's aim is to produce large, filled-in, flat flowers – he is not a fan of round, cuppy flowers.

His breeding program is primarily designed to produce flowers for the cut flower and show bench markets, although he also produces plants for the pot-plant trade. For Peter the perfect cut flower type plant is one that produces 10 – 14 flowers per spike. Pot size is restricted to a maximum 265mm or 10", although many plants can be seen flowering profusely in smaller pots. From each year's breeding program only about 2% - 3% of plants are considered 'throw away'. Many of Peter's stud plants have been sourced from Greg Bryant, and Andy Easton's, *Cym.* Kirby Lesh, has also proven to be a great parent. These imported plants together with Peter's own bank of exclusive stud plants will ensure that Kimberley Orchids continues to provide growers throughout Australia with quality cymbidiums – not only large flowered standards but also intermediate and miniature plants (Joyce's influence is starting to have an effect).

Each season Peter will send off approximately thirty pods for germination, although in 2009 only four pods were able to survive the rigours of an early Victorian hot spell. Moss Bray in South Australia does all the laboratory work for Peter. From flask, plants are potted into community pots and take on average about four years to reach flowering size.



Above:
Cymbidium (Kirby Lesh x
Kimberley Coast)

As mentioned previously, the plants are housed in simple but very effective structures that provide strong light and maximum air flow. The roofs of the many houses on the property are gradually being upgraded. Fibreglass roofing material, which has discoloured quite markedly over the years, is being replaced with opal polycarbonate sheets, this opaque material does not require the use of any extra shading. At the time of my visit, plants of *Cym.* Joan's Charisma 'Vanity', growing under low light conditions, were displaying their pristine white flowers to full effect. 50% shade is added in other areas of the houses during the height of summer. The walls of all houses are shade cloth material. Most plants are staged on wire mesh benching approximately 30 cm above the ground. Nie-co Rolls attached to the end of each stake, together with optimum care and growing conditions, ensure that the spikes develop their maximum length.

For those of you who know Kimberley Orchids and associate them with growing cymbidiums, you may be surprised to learn that they also grow, in much smaller numbers, vandas, cattleyas, *Sarcochilus*, brassias and oncidiums. Some of these genera are grown purely for the cut-flower trade, but it is not unusual to see Peter or Joyce bench award quality plants at the local orchid society.

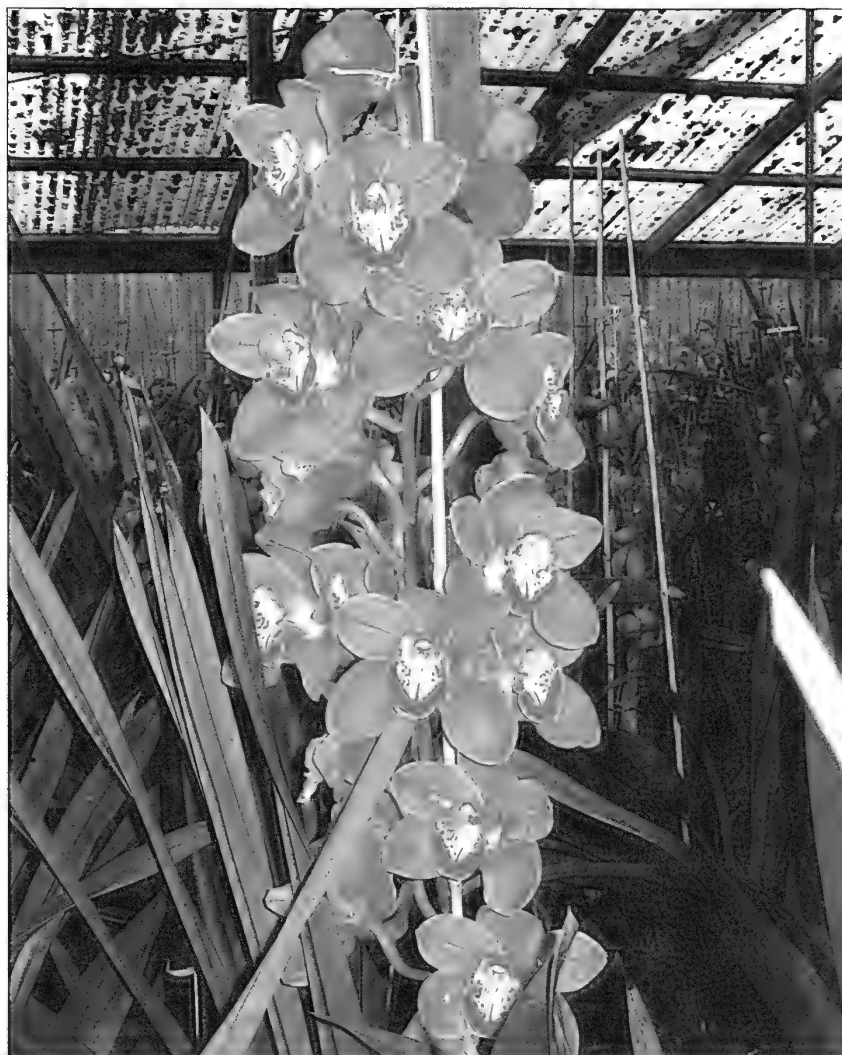


Right:
Cymbidium Kimberley Pass





**Cymbidium (Pure Envy x
Dream Temple)**



The work load at Kimberley Orchids is quite demanding and requires the three family members to devote many hours each day to ensure that the plants grow and flower to their full potential. Watering and feeding is done by overhead sprinkler systems throughout the growing season, but during the flowering season it is all done by hand – this can take all family members up to two days to water the entire collection. The plants are fertilised regularly and the use of dolomite lime ensures that the correct pH is maintained at all times. Peter mixes his own fertiliser, a recipe that he has so generously shared with many other growers. He is currently trialling the application of pelletised organic fertilisers when repotting or potting-on. The preferred potting medium is a combination of pine bark, coarse perlite and coco-chips.

Fertilising program consists of the following. All plants are top dressed with Multicote 8 month slow release fertiliser and dolomite lime. From the end of October through to May they liquid feed through the watering system, this liquid feed consists of the following ingredients - Potassium Nitrate, Magnesium Sulphate, Monoammanium Phosphate, Ammonium Nitrate, Calcium Nitrate, Trace Elements, Boric Acid, and Sodium Molybdate. The EC reading is between 200 - 500 depending on the time of the year. They do not use any liquid feed during June, July or August.

Left:
Cymbidium Hypno Beauty

Western Orchids /Laboratories

We offer a great range of **TISSUE CULTURE MEDIUM, HORMONE KEIKI PASTE, AGAR, FLASKS** – check our catalogues on the website **LABORATORY SERVICE** for sowing & cloning. Watch eBay for our flasks each week.

Props: Kevin & Helen Western
P.O. Box 276
Blackwood SA 5051

ph/fx: 08 8270 4599
email: westernorchids@bigpond.com
web: www.westernorchids.com.au

AOR 149



The success of Kimberley Orchids must be put down to the wonderful work ethic of all family members and the ability to work as a cooperative team. Even though so much has already been achieved they continue to strive for excellence and the production of that cymbidium flower that will re-write the record books.

The family has derived a comfortable lifestyle out of growing orchids but they are also wonderful supporters, as committee members and sponsors, of several orchid clubs. They are generous with their donations and the advice they offer all growers, novice to experienced, nothing is a secret. It is unusual in an industry that is so competitive and at times, cut-throat, that I have never heard a bad word spoken about Peter, nor have I ever heard him say a bad word about any of his orchid growing colleagues – he is generous in all ways.

Right:
Cymbidium (Last Tango x Vibrant Bliss)



Below:
Cymbidium (Last Tango x Vibrant Bliss)



Cymbidium
Green Glass
'Kimberley' (seedling)

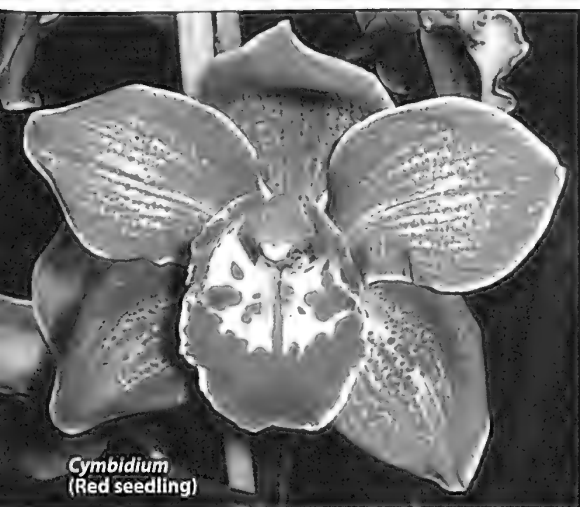
As stated earlier Kimberley Orchids has registered many crosses and received numerous awards, most of the awarded plants are from Peter's own hybridising program. It must be a great thrill to successfully grow, flower and then have awarded plants that you have created. Peter's strike rate for awards is relatively high but as we all know to be successful you must grow hundreds of seedlings. Among the awarded plants (all plants with the "Kimberley" prefix are from their own hybridising program) there are several that have received an Award of Merit (AM) at State and/or National level, these include:

Kimberley Cymbidium cultivars with AM	Year	Parentage
Kimberley Meadows 'Green Beret' AM	2000	Pure Zuma x Green Glass
Khan Flame 'Tuscany' AM	2001	Cronulla x Yowie Flame
Kimberley Lady 'Jasmine' AM	2001	Red Valley x Valley Splash
Kelly's Winter 'Golden Sovereign' AM	2002	Winter Wonder x Lois Kelly
Kimberley Valley 'Fairfield' AM	2003	Valley Zenith x Allumination
Kimberley Winter 'MB' AM	2004	Kelly's Winter x Allumination
Fair Delight 'Polar Bear' AM	2004	Downs Delight x Poetic Fair
Julie Hawkes 'Southern Belle' AM	2005	Red Beauty x Kelly's Winter
Kimberley Pass 'Isabell' AM	2007	Khan Flame x Lunar Flame



Above: *Cymbidium* (Spotted New Zealand clone)

Below: Entrance to Kimberley Orchids



In this same period, 2000 – 2009, Kimberley Orchids received 13 Highly Commended Certificate (HCC) awards. There are many hobby and commercial growers throughout Australia enjoying the fruits of this little master's hybridising program and who have also had numerous plants awarded during this time.

No doubt we shall continue to see Kimberley Orchids' name up there among the very best, as they chase that elusive FCC award. At the 2010 Cymbidium Orchid Society of Victoria Show, Kimberley Orchids won twelve of the ninety six classes, including one champion – a fantastic effort considering they were up against some of the very best growers in Victoria.

Geoff Bailey
Cranbourne, Victoria
Email: geoffrey.bailey1@bigpond.com



Above: An area of intermediate Cymbidiums

Above: Work area – staking Cymbidiums for pot plant sales

Right:
Tomorrow's champions – community pots
of hybrid Cymbidium seedlings





Above: *Cattleya Melody Fair 'Sachi'* – Champion of Show: Tokyo Dome 2011, Japan

More Thoughts on Orchid Judging

by Gordon Giles

It is now over two years since I wrote in this magazine asking for an explanation of the reasoning behind the award system. I honestly thought that someone in a position of responsibility would have responded, but from Australia not a word!

The Cymbidium Club of Australia via the October-November 2010 edition of the *Australian Orchid Review*, courtesy of Keith Harris, presented their excellent reasons for evaluating flowers. This Club for sometime has had standards with pictorials that they use to explain their aims. I am sure every hybrid *Cymbidium* grower would agree that these ideals are what we are looking for in *Cymbidium* perfection. So for them no problem. This is excellent and should be available for many other genera, so that the orchid growing community, should they decide to exhibit their plants, will know what they must aim for.

However I did receive a number of replies from overseas. All agreed that there were problems and that nobody had any new ideas to solve them. One most interesting reply from the USA said that it was important to have pictorial records of what had gone before so that any award granted would be an improvement on previous ones.

The reply that got right to the point came from New Zealand. This was quite a wide ranging piece of correspondence. The most interesting part was, and I quote: "While the Judges do a very good job placing the flowers in a show I have very serious doubts as to their knowledge when it comes to awarding. Some haven't a clue about many of the more unusual genera we now see on display. Others only grow a few (if any) and most either don't know (new judges) many of the earlier favourites or (older judges) have memories, which are fading fast. Each time I remind someone we should



Above: *Coelogyne cristata* forma *hololeuca* 'Pure White' – Reserve Champion: Tokyo Dome 2011, Japan

be looking at the percentages to see if the one up for award is an improvement it is either too much trouble, not enough time, or everyone is tired and it is late. Another problem is 'follow the leader syndrome'. They all sit back waiting for a few of the stalwarts' hands to go up then they all follow suit."

So it would appear from New Zealand that what I thought could be happening, but hoped wasn't - is, that judges often give awards *because they can*.

Another matter that I have discussed before is that regarding "Best of Show". Now my thoughts are that it should be the plant (flower) that is nearest to perfection. This is interesting, as say a very good complex *Paphiopedilum* is a vast improvement horticulturally over a species. So should a good complex hybrid be considered better than a species or primary cross? However this is not always what happens. The same with cymbidiums, and indeed most of what we may call commercial genera.

I feel that the difficulty in achieving this state of near perfection should also be considered. Thus a large *cattleya* that is far harder to bring to perfection than say a miniature one should get some recognition of this fact. So size should count in a small way. Now however, another element has entered the equation, and that is the size of the plant and its floral offering. These matters should have been discussed by the appropriate parties and decisions made should be down in

print. Now I have always believed that a Champion of Show should look like a champion, so I have I guess always favoured larger flowers, however I have never considered that a specimen would be worthy of extra points. There has already been at least one local show where a specimen, a huge plant of an average example of the species *Cymbidium erythraeum*, has won Champion of Show.

At the Japan Grand Prix International Orchid Festival 2011 at The Tokyo Dome, the Champion of Show (*Cattleya* Melody Fair 'Sachi') and Reserve Champion (*Coelogyne cristata* fma. *hololeuca*) were fairly average quality flowers; however the overall display was just stunning. Kevin Butler attended this event and sent me photos of these winning plants; his images are reproduced with this article. They were both massive, well grown specimens just covered in flowers. I am sure that most people would agree that the judge's decision was correct.

Now I have an opinion on this, however it's certainly not for me to even suggest whether it is right or wrong. But I know that it should be discussed by the various judging panels and the decision made public. Indeed one of the problems in judging is that the appropriate panels are not prepared to put down anything in print so that it is available to amateur growers, letting them know the virtues that are taken into account when the judges are at work.

We see quite a number of amateur growers at our nursery during the flowering season. As one of our favourite occupations is cups of tea and discussions about orchids, we hear many interesting things. One thing that is often stated when an unusual species or more elementary flowers wins Champion of Show, is that the judges are not sure in their own minds what makes a good say, *Cattleya*, complex *Paphiopedilum*, *Phalaenopsis* or *Cymbidium*, genera that I look upon as commercial flowers, so go for the unusual. Are they scared to make a selection from these commercial types for fear of picking the wrong one, which is on display for easy and instant comparison? Whereby the plant from left field may have no similar opposition in the show being judged?

Now I do not say there is any truth in this, however it is a regular topic of conversation. A recent article in this magazine suggested that with cymbidiums their potential as a pot plant should be considered. I think this is a little silly. We have supplied that market for many years, and I can assure you that the only people who know what makes a good pot plant are the people who buy them. Their requirements vary from suburb to suburb, size wise and colour wise. Indeed colour is more than likely the most important factor and seems to change from year to year. With the lead time it takes to bring a plant to flowering you need to make a lucky guess. I am sure that this is an area that should be avoided by judges. There is certainly no other field of horticulture that I know of where commercial use comes into the judging process. There are enough problems for the judges to come to terms with without that.

New and trainee judges have a problem today due to the lack of exposure to a wide variety of quality flowers. There is no retail orchid nursery in the greater Sydney area where they

can go and look at flowers at their leisure, discuss with others the various aspects that are desirable and what should be avoided. We are a wholesale indoor foliage and orchid nursery but grow only *Cymbidiums* and *Phalaenopsis*, so do not fill the requirements necessary to study a full range of orchids. They do see flowers at shows (which generally are a lot smaller than they were a decade or two ago), usually at great speed during the judging and often not close-up, and judging meetings rarely have the best material available to study.

What I feel is badly needed is some literature with photos of what is ideal that should be looked for. I offered to finance this once, however the people who had the necessary records showed no interest. I hope there is some feedback to all this.

Surely there must be a judge somewhere who is prepared to put in print the reasoning behind the decisions that are made. I believe that if one cannot explain what you are doing, you more than likely don't know what you are doing.

One idea that could be followed up is for the leading judge to briefly explain to those present at the end of the judging why the Champion was chosen. This is a common practice at many agricultural and horticultural shows, and is deeply appreciated by the exhibitors. It gives confidence to all and definitely increases the judges standing.

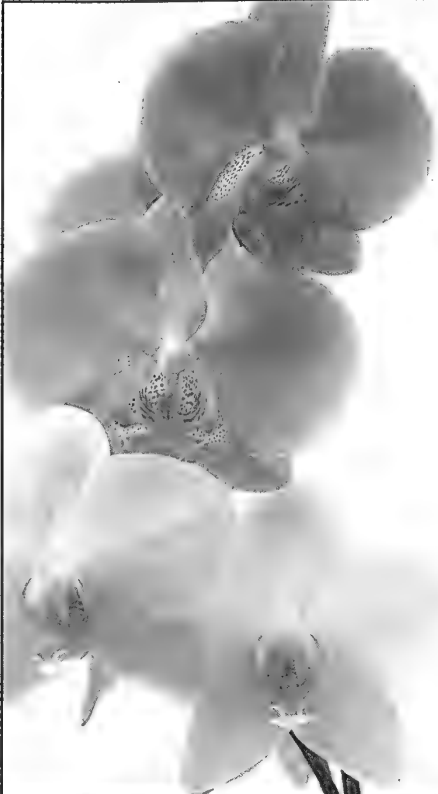
Our nursery is open Monday to Thursday and Keith and I invite you to join us for a cuppa and we would be very happy to discuss these and other matters.

Gordon Giles


Keith Wallace Pty Ltd

Dural, NSW

Email: keithng@tpg.com.au



Grow With Us



American Orchid Society

.....

*Beginner or expert, share your passion
for orchids by becoming a member of the
American Orchid Society today!*

.....

For American Orchid Society
membership information
and benefits,
please go to www.aos.org,
e-mail TheAOS@aos.org
or call 561-404-2062.

16700 AOS LANE, DELRAY BEACH, FLORIDA 33446 561-404-2000

ORCHIDACEOUS SUPPLIES

Suppliers of a wide range of Orchid Accessories

Whether you are a hobbyist or a professional orchid grower – we can supply your needs.

**Pots – dome pots – Pot Pots –
trays – stakes – plant clips – Pot Clips –
Labels – pens – fertilisers – hangers –
wide range of wire products.**

**Growing medias – bark, coconut husk, treefern,
perlite, peat, charcoal, sphagnum moss and more.**

Agent for Eco Products

Catalogue available on request

Grahame & Margaret Muller

P.O. Box 4192, Tinana, Qld. 4650

Ph: 07 4122 1251 Fax: 07 4122 4539

Email: supplies@orchidaceousbooks.com.au

Cattleyas Online

Quality exhibition cattleyas are our specialty.

For a catalogue please phone, fax, or e-mail us as below.

You can also visit us on the Internet at www.cattleyasonline.com.au

Phone/Fax: 07 3388 0866

Mail: PO Box 4612

Loganholme 4129

E-mail: info@cattleyasonline.com.au



Above: *Arundina graminifolia* Samar, Philippines – possibly introduced (photo: Jim Cootes)



Above: *Arundina graminifolia* peloric pink form from Peninsular Malaysia (photo: Peter O'Byrne)

Arundina graminifolia - A Picture of Variability

Text and photos by Jim Cootes

The recent World Orchid Conference, which was held in Singapore - November 2011, was a revelation as to the amazing variability of some of the more well-known species, in this case *Arundina graminifolia*.

One afternoon a group of us went to the Singapore Botanic Gardens, where some of the plants pictured within this article were photographed. There were also plants of select colour forms of *Arundina graminifolia* for sale in the sales area at the World Orchid Conference.

In the Singapore Botanic Gardens the plants were all growing as terrestrials, in raised beds and always in full sun. There was a large range of size in the plants with some specimens only 40 cm tall whilst others reached several metres in height.

There was also considerable variation in the habit of the inflorescences, some specimens bore branching inflorescences, whereas others were single-flowered.

The main attraction, to me at least, is the wide variation in the colouration of the beautiful *Cattleya*-like blooms. The colour of the sepals and petals ranges from pure white, to pink, lavender, and purple. The labellum is also extremely variable, as to the varying shades of yellow, orange, and brown within the throat. Also the actual size of the labellum varies considerably between different clones of this delightful species. Peter O'Byrne, from Singapore, has photographed a couple of peloric forms (where the labellum is the same shape as the petals) of this species in Peninsular Malaysia (pink specimen) and Sabah (white form). The plants of these peloric forms are only 35 cm tall!

Over the years this species has had many names applied to it, and this is because of the huge variation found throughout the various localities, in the many countries where it grows. It is known to occur from sea-level, to elevations of well over 2,000 metres.

This species has been recorded from most of mainland Asia, Sri Lanka, the Indonesian archipelago, Borneo, Sulawesi, the Philippines (where it may be introduced), Taiwan, and has become naturalised in the islands of Hawaii and a number of the islands of the Pacific Ocean.

The genus *Arundina* was established by Carl Blume in 1825. The name refers to the growth habit of the genus, which is reed-like.

Arundina graminifolia was first named, in 1825 as *Bletia graminifolia*, by the Scottish botanist David Don (1799 - 1841). Bénédict Hochreutiner, from Switzerland (1873 - 1959) transferred it to the more appropriate *Arundina* in 1910.

The specific epithet, *graminifolia*, refers to the grass-like foliage.

Sincere thanks to Peter O'Byrne for the use of his pictures of the peloric forms of *Arundina graminifolia*.

References:

- Barretto G. *et al.*, 2011. *The Wild Orchids of Hong Kong*, Natural History Publications (Borneo)
- Chan C.L. *et al.*, 1994. *Orchids of Borneo* Vol. 1, The Sabah Society, Kota Kinabalu and Royal Botanic Gardens Kew.
- Cootes J. 2011. *Philippine Native Orchid Species*, Katha Publishing Co. Inc. Philippines.
- O'Byrne P. 2011. *A to Z of South East Asian Orchid Species* Vol. 2, Orchid Society of South East Asia, Singapore. ■

Jim Cootes

Riverwood, NSW

Email: jecootes@ozemail.com.au

Below: *Arundina graminifolia* peloric white form from Sabah (photo: Peter O'Byrne)





Above: Variation within *Arundina graminifolia* at the Singapore Botanic Gardens (photos: Jim Cootes)

Danhatchia australis in Australia

by David Banks

The monotypic genus *Danhatchia* was previously considered a New Zealand endemic. It was previously classified and described by Dan Hatch as *Yoania australis*. In *The Orchadian* in 1995, Leslie Garay & Eric Christenson reclassified this saprophytic species as *Danhatchia australis*.

The excellent and informative New Zealand Native Orchids website www.nativeorchids.co.nz (maintained by Ian St George on behalf of the New Zealand Native Orchid Group) describes *Danhatchia* as follows:

***Danhatchia australis* (Hatch) Garay & Christenson, *Orchadian* 11: 470 (1995).**

PLANT: A rhizomatous, leafless saprophytic species associated with Taraire or Nikau trees. Stems pinkish to dark brown, lacking chlorophyll.

LEAVES: 1 to 7 mushroom coloured scale leaves along the stem. Those lower on the stem half-tubular, those higher up open sheathed.

FLOWERS: 1 to 5 glandular-pubescent flowers that rarely open, and then never widely. 6mm in length, tubular in shape. Mushroom coloured with white tips. Self pollinating.

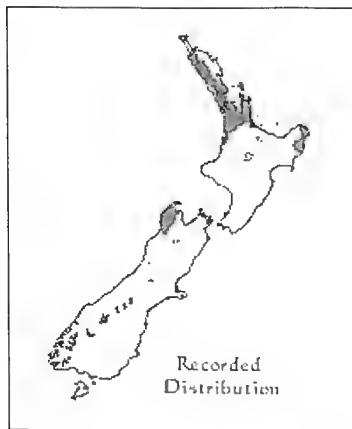
FLOWERING TIME: December - February.

HABITAT: Forests. Nearly always beneath Taraire or Nikau trees.

CONSERVATION STATUS: At Risk - Naturally Uncommon.

NOTES: May exist for years underground without emerging if conditions are unfavourable.

NZ DISTRIBUTION:



Australian Records

However in 2010 a small colony of plants was discovered in Australia on the Comboyne Plateau, north of Taree, New South Wales. It was growing on the fringe of subtropical rainforest near shrubs of *Citriobatus* (member of the *Pittosporaceae* Family). This has also been documented on the NSW Flora Online website (<http://plantnet.rbgsyd.nsw.gov.au/>). The photographs (by Wayne Cherry) confirm its self-pollinating (cleistogamous) habit. It is not known yet if these flowers indeed open for a short duration before self-pollinating. This may be dependent on temperature and/or sunlight. Apparently the NZ plants flowers open before self-pollinating (as seen in Eric Scanlen's images).

In January 2012, Greg Steenbeeke with Colin Hunt and Andrew Harvey were looking for another litter saprophyte *Thismia* (Fairy Lanterns) and Greg stumbled upon a colony of eight stems of *Danhatchia australis* at Fairy Bower Falls, Bundanoon on the Southern Highlands of NSW. A photo of that plant appears with this report.

These new discoveries pose a number of questions. The main one being is *Danhatchia* indeed an Australian species (that has been previously overlooked, misidentified or undiscovered) that also established itself in New Zealand as seed via trade winds – as did a number of other Australian terrestrial orchid species that occur as localised populations in New Zealand (such as *Pterostylis nutans*, *Pterostylis tasmanica*, *Cryptostylis subulata*, *Chiloglottis valida* and *Calochilus robertsonii*). Due to the predominant easterly trade winds, it is highly unlikely that orchid seed could be blown from New Zealand to Australia.

Whilst this saprophytic species is hardly going to excite many orchid growers, it certainly is of great interest to botanists due to its rarity, distribution and unique characters and to those studying the links between the flora and fauna from both sides of the Tasman Sea.

David Banks

Seven Hills, NSW

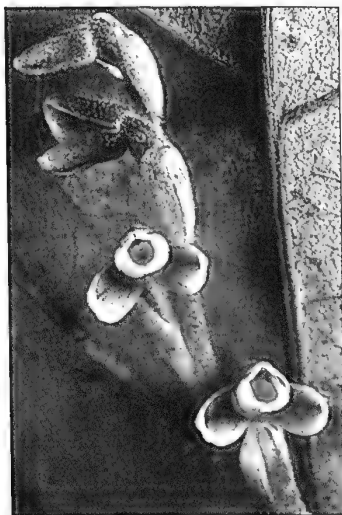
Email: david@hillsdistrictorchids.com



Above left: *Danhatchia australis*
(Bundanoon, January 2012)
Photo: Greg Steenbeeke
(email: orkology@gmail.com)

Above centre: *Danhatchia australis*
(Comboyne Plateau)
Photo: Wayne Cherry
© The Royal Botanic Gardens & Domain Trust

Above right: *Danhatchia australis*
(Comboyne Plateau)
Photo: Wayne Cherry
© The Royal Botanic Gardens & Domain Trust



Left: *Danhatchia australis*
(New Zealand)
Photo: Eric Scanlen,
New Zealand Native Orchid Group

Sick of writing plant tags?

- THEN WE CAN HELP YOU
- Small Runs of printed tags
- Great prices
- Quick Turn-a-round

(apt) aussie plant tags

Contact David or Pauline Brewster at
Email: apt@tags.net.au
Web: www.tags.net.au

9 The Grove, Tel: (03) 9761 1100
Boronia, Vic. 3155 Fax: (03) 9761 0892

AOR 020



THE Orchid pot co.

SQUARE VANDA POTS
165mm x 165mm x 80mm
100mm x 100mm x 60mm

ORCHID POTS	200mm x 100mm	120mm x 120mm	80mm x 65mm	BASKET POTS
300mm x 120mm	175mm x 120mm	100mm x 120mm	70mm x 50mm	200mm x 130mm
250mm x 150mm	150mm x 100mm	100mm x 75mm	60mm x 70mm	140mm x 100mm
200mm x 200mm	125mm x 75mm	80mm x 100mm	50mm x 65mm	80mm x 75mm

21 Jambali Road, Port Macquarie, NSW 2444 Australia

Phone: (02) 6581 1735
Website: www.orchidpotco.com

Fax: (02) 6581 1736
Email: orchidpotco@bigpond.com

AOR 001

Orchid Productions

For new list and tours visit our website

www.orchidproductions.com.au

Email: philspenceorchidpro@msn.com

PO Box 3525, Wamberal NSW 2260
Phone: 0408 994 696 Fax: 02 4384 4304

AOR 024

Some of my Favourite Native Ground Orchids:

"So many orchids, so little time"

Text and photos by Tony Rodgers

So what are my favourite orchids? I should probably start by saying that I'm writing this note from the point of view of a bush-walker, budding photographer and keen amateur Australian native orchid enthusiast. I am not a trained botanist and I have a poor track record of growing orchids, even the "easy" ones (this article could be sub-titled "Confessions of a Serial Cymbidium Killer").

My fascination with Australian native orchids grew gradually from noticing orchid flowers in New South Wales National Parks while I was out bird-watching and bush-walking. My increasing curiosity about the number of species happily coincided with a growing interest in digital photography and the purchase of a new digital camera. From then on, I was hooked. I can now be frequently seen staggering around NSW National Parks under the weight of photographic equipment including my Pentax K200 DSLR, macro lenses, flash, in addition to binoculars and the usual bush-walking gear.

In the pursuit of macro photographs of very small terrestrial orchids, I frequently lie down on the ground and have in the process, been attacked by a wide variety of biting, sucking and stinging creatures, including sand-flies, mosquitoes, ants, ticks, leeches (and others that I didn't even notice at the time, don't know the names of, but which have nevertheless left unbearably itchy bites).

The orchids I've chosen to include in this article are not necessarily rare, spectacular or showy. But I derive much enjoyment from observing and photographing them and bringing out details which may not be apparent to the naked eye. All the photographs in this article were taken in the wild and have not undergone any 'post-processing'. I have included the traditional names, as well as these recognised under the recent taxonomic treatment by the National Herbarium.

My first choice is the tiny "Ant Orchid" *Chiloglottis formicifera* (*Myrmechila formicifera*). Because of its small size, this is not an easy flower to see in detail or photograph well. The *Chiloglottis* group employ sexual deception to achieve pollination, male ants being attracted by a pheromone-like chemical released by osmophores at the end of each lateral sepal. I find the shiny 'ant-like' calli on the labellum utterly fascinating, as well as the deceptive mechanism this plant uses in order to ensure its pollination. These commonly flower in bushland around Sydney in July and August.

Left:
Chiloglottis formicifera





Above: *Corybas pruinosus*

My second choice is another small one, *Corybas pruinosus* (*Corysanthes pruinosus*). I find the shape, colour and textures of this orchid quite bizarre. When magnified, it almost looks like an alien creature. I regularly see these flowering in several NSW locations including Myall Lakes National Park and Royal National Park, during May to June. I have seen some large colonies consisting of up to a couple of hundred individuals. Last year we even found a few white-flowered ones.



Right: *Corybas pruinosus*
(white form)



Glossodia major

My third choice, *Glossodia major* "Waxlip Orchid" is a fairly common species in spring around the Sydney area, but which I find interesting to photograph. I've been surprised at the large numbers of these I've seen in good years in the drier country further west, for example in the NSW mid-west. This one was photographed near Cowra.

Mollie Phallies

Importing orchids from around Australia on a regular basis

Phals, paphs, cattis, oncidis, dendis and others

25-30 years experience

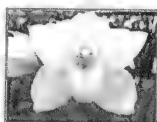
Free delivery within Australia

Keva Lloyd, 8-12 Gallagher St., Sea Lake. Vic. 3533
 Ph. 03 5070 1404 BH, 03 5070 2072 AH
 Email: malleephallies@gmx.com

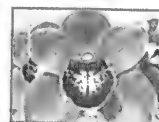
Caladenia picta



My fourth choice is one of the 'Caladenia' species, now sub-divided into several genera. This *Caladenia picta* (*Petalochilus pictus*) was photographed at Myall Lakes National Park in early winter. This is another fairly common species in NSW which flowers in large numbers in many areas. However I find them interesting when viewed close up and a challenge to photograph well on account of their uniform colour.



SPRINGFIELD ORCHIDS



2012 CATALOGUE

32 Lyndhurst Road Kalamunda WA 6076
Phone: (08) 9293 3196 Email: nado@iinet.net.au
Phone email or write for your copy

Prop. Nado Lenkic

WEB: www.springfieldorchids.com.au



Pterostylis revoluta

For my last and most favourite choice, I'm going to cheat and include the entire 'greenhood' group. Even before I learnt to distinguish between *Pterostylis* species, I was always fascinated by their shiny curvaceous appearance and their habit of forming large colonies by vegetative reproduction. There is also something

remarkable about how these orchids (and many other terrestrial species) can lie dormant under the ground for so long with no sign of their presence, some of the drought-tolerant species going years without flowering. There is something almost magical about the way their fresh new growth springs up

out of the ground, often in places you would least expect. I've chosen three of the larger species, the autumn flowering *Pterostylis revoluta* (*Diplodinium revolutum*) from NSW mid-west, another autumn flowering species *Pterostylis longicurva* (*Diplodinium longicurvum*) from the Warrumbungle National Park, the rare

Pterostylis longicurva





Above: Variation within *Diuris venosa*

Left:
Pterostylis alveata

Pterostylis subtilis flowering in December at Barrington Tops National Park (flowering at the same time, only a few kilometres away from populations of the wonderful *Diuris venosa*), as well as the smaller *Pterostylis alveata* (*Diplodinium alveatum*) from Copeland Tops State Conservation Area in March.

It's been difficult to single out even these favourites, as there are so many which deserve attention both on account of their appearance, habits and rarity, not to mention their threatened status. Ask me again in a year's time and you'd probably get a different list!

Tony Rodgers
Sydney, NSW

Email: tony.rodgers@sydney.edu.au



Right:
Pterostylis subtilis

Dimorphorchis tenomensis

Text by Murray Shergold, photos by Greg Staader

It's always gratifying to bloom a seldom seen or very rare orchid species. Even more so when it has been artificially propagated, and you have grown it from flask to flowering.

Such is the case with the northern Borneo species - *Dimorphorchis tenomensis*. This species is one of five recognised in this monopodial genus, following the revision by Phillip Cribb in 2008. It was previously known as *Dimorphorchis rossii* var. *tenomensis* and was discovered in the early 1990s.

Our plant was derived from a miniflask imported direct from Borneo about five years ago. It was a selfing of a plant from Tenom, Sabah. Our illustrated plant flowered just over four years from deflasking.

What makes these orchids interesting is the fact that they produce separate, and different, male and female flowers on

the same inflorescence. The male flowers are generally more colourful, fleshier and larger, whilst the female blooms are usually smaller, paler but produced in large numbers. The first flowers – at the start of the flowering part of the inflorescence – are always the males, and then these are followed by female blooms.

We have pollinated numerous flowers in the hope that we can multiply this rarely seen species, and make it available to the wider orchid growing community in the years ahead. ■

Murray Shergold

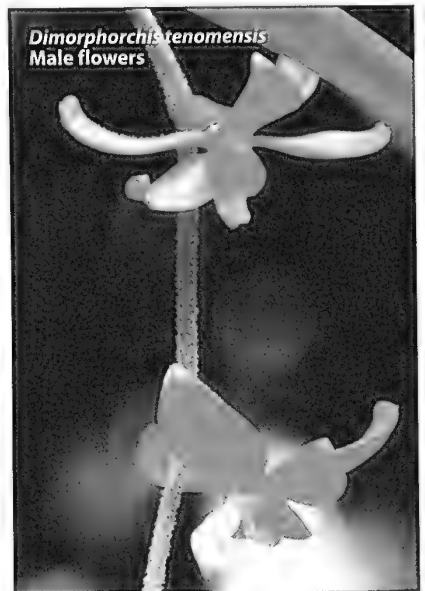
Easy Orchids

Woodburn, NSW

www.easyorchids.com



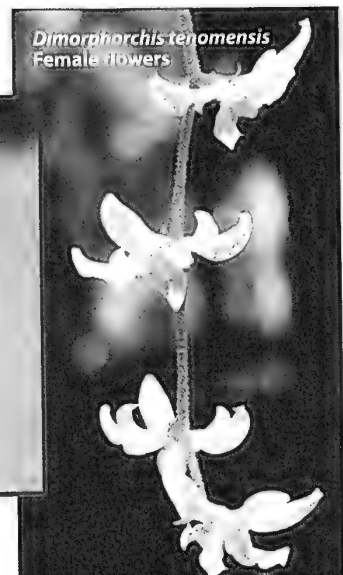
Dimorphorchis tenomensis
Plant in flower, showing both
male and female blooms



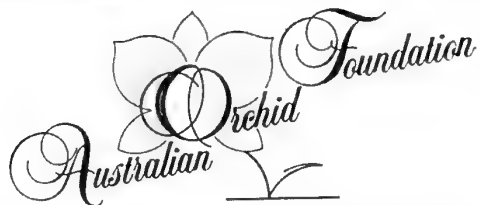
Dimorphorchis tenomensis
Male flowers



Dimorphorchis tenomensis
Close up of male flower



Dimorphorchis tenomensis
Female flowers



The Foundation is pleased to announce the establishment of the **AOF Essay Prize**.

The AOF Essay Prize is an annual writing competition, established with a generous endowment by the Slade family.

There will be three prizes –

1st Prize	\$350.00
2nd Prize	\$250.00
3rd Prize	\$150.00

The Foundation invites all Australian orchid growers to consider the topic for 2012 and submit an entry. We would not only like to reward you, but we would like to hear about your ideas and experiences and benefit from them.

ESSAY TOPIC FOR 2012:

“Orchid Conservation At Home”

Let us know about your approaches and philosophies in meeting some of the more recent problems that can influence your culture of orchids. You may like to write about how you and /or members of your orchid society have coped with water restrictions, or the expensive cost of electricity and gas, or the limited space you have for your orchids now you have down-sized. These are just a few ideas to help you get started.

The deadline for receipt of all entries is June 30th 2012

Send your entry to:

AOF Essay Prize P.O. Box 322, Essendon North Vic. 3041

or electronically to aof@australianorchidfoundation.org.au

Entry Rules:

- This competition is open to Australian residents only
- The essay will be an original article, not previously published
- The essay must be no more than 3,000 words, short essays are most welcome
- The essay is to be in English, typewritten and doubled-spaced
- Entries may include art work or images
- The authors of the essays will remain undisclosed to the judges, whose decision will be final. If in the opinion of the judges, no worthy essays are received, there will be no award that year
- Non-winning entries will be returned to the sender. These entries may be submitted to the editors of Australian orchid periodicals for publication, with permission from the author
- The winning essay will be announced at the AGM of the Foundation in October 2012
- The winning entry will be published on the AOF website and in Australian orchid periodicals

Orchid Species Plus

**Specialising in species orchids,
flasks and selected hybrids**

Mail Order specialists
Open by appointment only

Props: **Bill and Jan Miles**
405 Main Street
Kingston, Victoria 3364

03 5345 6387
orchidspeciesplus@bigpond.com
www.orchidspeciesplus.com.au

AOR 041

ORCHIDS NORTH

Gordonvale 20km South of Cairns
On The Bruce Highway



AOR 051

**Vandas,
Dens,
Cats,
Phallies,
& more.**

No Catalogue Available

email: orchidsnth@bigpond.com
Phone (07) 4056 2357 Mob 0405 453 171

Mt Beenak Orchids

No. 1 for Masdevallias

**Check out our complete range
of cool growing orchids
on our website:**

www.mtbeenakorchids.com.au

*Cool growing orchids and
Mail Order our speciality*

27 Hacketts Creek Rd, Three Bridges, Vic. 3797
Ph/Fax (03) 5966 7253
Email: clivehalls@bigpond.com

AOR 124

FLORA'S ORCHIDS

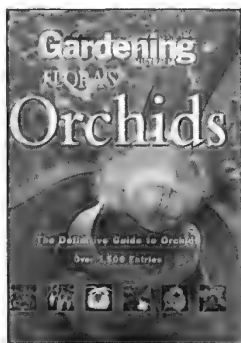
Senior Consultant David P. Banks

Part of the best-selling *Flora* range, this is the definitive guide to orchids with over 1,500 entries. Ranging from the unique to the unusual, the beautiful to the bizarre, orchids have long symbolised beauty, elegance and refinement. *Flora's Orchids* presents more than 1,500 varieties of this highly variable plant family, with entries accompanied by at least 1,300 stunning colour photographs. The orchids are arranged by genus in an A-Z format. Each entry first lists the scientific name in Latin, often accompanied by a Latin synonym and, where appropriate, the translated common name. Plant spread and height are listed, followed by symbols indicating plant type, natural growing locations, growing conditions, frost tolerance, preferred temperatures, type of flower, and preference for pot or mount cultivation. The brief descriptions explain the type of genus, geographic area, and flowering and dormancy seasons. There is a wealth of sound cultural and propagation advice.

AOR Editor David P. Banks was the Senior Consultant for *Flora's Orchids* and is also credited as the Principal Writer. Especially valuable for aspiring botanists and average gardeners is the background information that precedes the dictionary text and explains orchid varieties, taxonomy, hybridisation, history, cultivation, propagation, and more. The history section delves into the fascinating historical development of the plant for culinary and medicinal usage and also explores the use of orchids in folklore and literature. A detailed cultivation table for each of the species is found in the appendix. This work is regarded by many as the logical replacement of *What Orchid Is That?*

368 pages, colour.
308mm x 238mm.
Hardcover.

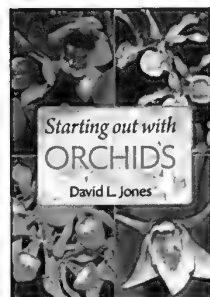
OUR DISCOUNT PRICE \$A54.95 (incl. GST)
was \$75.00 RRP (incl. GST) PLUS POSTAGE AND HANDLING



The publishers of the
Australian Orchid Review
are pleased to offer readers popular
orchid books at special discount prices.

Just select the book(s) you require and
fill in the details on the form provided.

New titles will be added to the list when
they become available.



STARTING OUT WITH ORCHIDS

by David L. Jones

David Jones is arguably one of Australia's most prolific, precise and respected botanical and horticultural authors. The book is divided in two parts. Part One begins with the cultivation chapters, covering Easy Orchids for Beginners, General Cultivation Requirements, Growing Epiphytic Orchids, Growing Terrestrial Orchids, Orchid Pests and Diseases, Housing Your Orchids and Propagating Your Orchids. The information contained within these pages alone is required reading for all beginners through to experienced orchid growers. The text is very easy to read and understand with numerous sound cultivation tips and treatments discussed. There are many excellent and clear line illustrations that help describe terms or highlight diagnostic features. There are over 250 colour photographs.

Part Two discusses the orchids themselves with concise information on each species. They are grouped primarily according to climatic requirements, starting with cool growing orchids progressing to the warm growers, in alphabetical sequence first with terrestrial genera, followed by the epiphytes. Both Australian and exotic species are treated together. For each entry there is specific detailed information on each species, as well as a simple table giving the basic cultivation needs and flowering season. A glossary is also included to explain unfamiliar terms.

240 pages, colour.
210mm x 148mm.
Softcover.

OUR DISCOUNT PRICE \$A26.95 (incl. GST)
was \$29.95 RRP (incl. GST) PLUS POSTAGE AND HANDLING

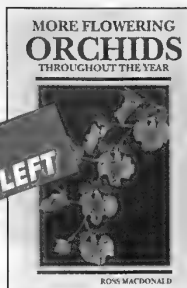
MORE FLOWERING ORCHIDS THROUGHOUT THE YEAR

by Ross Macdonald

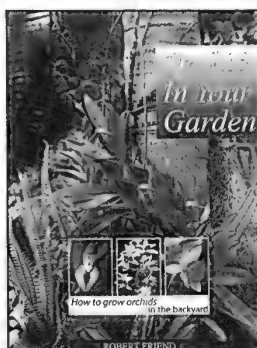
This is the sister volume to *Cool Flowering Orchids throughout the Year*. It is in the same format and style as the previous book, but also includes some species that would require artificial heating in winter. This volume covers a further 314 species, with 344 colour photographs. It is a must-have for all orchid fanatics and newcomers who wish to see an array of beautiful flowers that they could grow.

132 pages.
242mm x 168mm.
Softcover.

OUR DISCOUNT PRICE \$A25.30 (incl. GST)
was \$29.95 RRP (incl. GST) PLUS POSTAGE AND HANDLING



**Now out of print
ONLY A FEW COPIES LEFT**



ORCHIDS IN YOUR GARDEN

How to grow orchids in
the backyard
by Robert Friend

It sounds too good to be true, but orchids are as easy to grow in the backyard as a lawn or a bed of roses. Despite their exotic reputation, the everyday gardener can grow orchids without special pots or greenhouses.

The book shows you how to introduce orchids into the garden, by attaching them to trees, fixing them on rocks and walls, or planting them in garden beds. With more than 150,000 species and hybrids of orchids in the world, there are plants suitable for every garden.

Robert Friend draws on a lifetime's experience with orchids to explain how to choose the right orchid for your climate and how to landscape orchids in different types of gardens. Ranging from tropical to cool climate areas, from large acreages to small courtyard gardens, almost every backyard can enjoy the best of one of nature's wonders.

144 pages.
Colour and B&W.

OUR DISCOUNT PRICE \$A19.95 (incl. GST)
was \$22.50 RRP (incl. GST) PLUS POSTAGE AND HANDLING

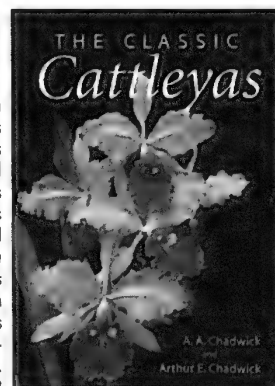
THE CLASSIC CATTLEYAS

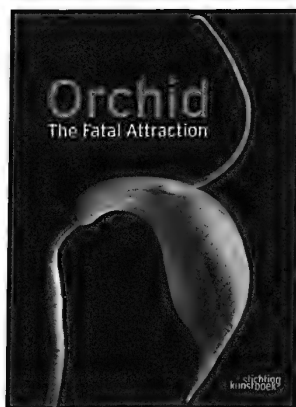
by A.A. Chadwick and
Arthur E. Chadwick

In 1818, William Cattley succeeded in flowering one of the first species of the genus that would bear his name. These first cattleyas are the classic cattleyas, whose form defined the essence of tropical orchids for generations to come. Indeed, the colour of their flowers became known as "orchid." In this helpful and informative book, each classic *Cattleya* species (and cattleya-like *Laelia* species) is described in fascinating detail, and its role in breeding programs is elucidated. All that is required to appreciate and grow the large-flowered cattleyas successfully is included. There are ten line drawings and 162 wonderful colour photographs. Cultivation, humidity and watering, fertilising, propagation, and diagnosing and treating problems are detailed, making this volume valuable for both veteran orchid enthusiasts and those who simply love these beautiful flowers.

252 pages, colour.
260mm x 185mm.
Hardcover.

OUR DISCOUNT PRICE \$A49.95 (incl. GST)
was \$89.50 RRP (incl. GST) PLUS POSTAGE AND HANDLING





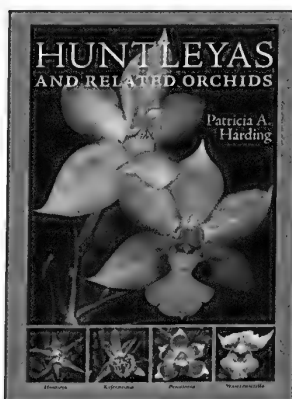
text and images; this is the book for you.

142 pages.
Colour. Hardcover.

ORCHID: THE FATAL ATTRACTION by Anne Ronse

The subject of orchids is one close to the heart of many floral designers. Some feel it's a privilege to work with these flowers and plants but often wonder how many designers actually decide to investigate the history and nature of them rather than just how to condition them. The text by Dr Anne Ronse, is informative and enthusiastic and the photography is superlative! It's so good that the flowers literally drip off the pages capturing the imagination and the heart. If you want something special, are addicted to orchids and want to luxuriate in glorious

OUR DISCOUNT PRICE \$A59.95 (incl. GST)
was \$85.00 RRP (incl. GST) PLUS POSTAGE AND HANDLING



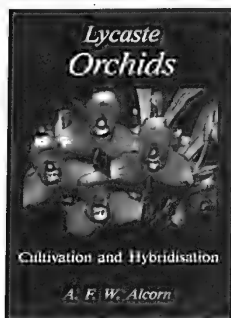
HUNTLEYAS AND RELATED ORCHIDS by Patricia A. Harding

Revered by avid orchid collectors for its delightful, star-shaped flowers, *Huntleya* is a small group of orchids found low in the forest. *Huntleya* is a small orchid genus that includes fourteen species. They occur in wet cloud forests at medium altitudes of Guatemala, Costa Rica, South America down to Bolivia. The type species *Huntleya melegaris* also occurs in Trinidad. Besides their striking colours — from deep blue to waxy red, royal purple to almost black — flowers of this group are known for their distinctive shapes, patterns, and textures. As appealing as these lovely tropical orchids are, their identification has been

confused since the first species was described in the mid-1800s. Recent DNA studies have led to a clearer understanding of relationships and, as a result of this clarity, it is now possible to sort out the taxonomic problems and identify the characteristics that set species apart. In this first book devoted to the *Huntleya* alliance, author Patricia Harding presents evidence from the scientific literature, other growers, and her own experience that will enable orchid enthusiasts everywhere to identify their plants and grow them successfully. Patricia A. Harding is an accredited American Orchid Society judge who has been growing and photographing orchids for three decades.

260 pages, 150 colour photos. Hardcover.

OUR DISCOUNT PRICE \$A44.95 (incl. GST)
was \$85.00 RRP (incl. GST) PLUS POSTAGE AND HANDLING



LYCASTE ORCHIDS - Cultivation and Hybridisation by A.F.W. Alcorn

Lycaste orchids are easy to grow, and they produce flowers that range from the beautiful to the bizarre. No book previously has provided detailed cultural requirements of the Lycaste, and this book should fill that gap, and encourage new growers to take up the cultivation of this beautiful genus. A section on hybridising contains valuable information on inheritance and genetics that will benefit any hybridiser, not just the grower of Lycastes, as well as helpful hints on how to avoid pitfalls in your hybridising program. Michael Hallett, a friend of

Fred Alcorn for a number of years, co-wrote this book with Fred and has completed it posthumously. He has a background in genetics, research and botany, and a passion for plants, especially orchids.

237 pages.
Colour and B&W.

OUR DISCOUNT PRICE \$A15.00 (incl. GST)
was \$28.55 RRP (incl. GST) PLUS POSTAGE AND HANDLING

GROWING PHALAENOPSIS AT HOME by James Neal

This book is essential reading and reference for any person who grows, or is intending to grow, Phalaenopsis.

Jim, in a simple and easily understood style, explains and elaborates on light conditions, watering, temperatures, fertilisers, pests and diseases.

Explanations of the way Phalaenopsis are named and the implications of growing seedlings, illustrate some of the more difficult ideas for the layman to understand.

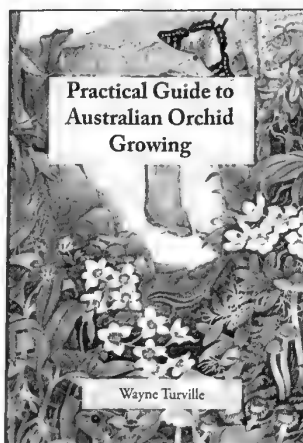
The colour photography illustrates beautifully the topics under discussion and the orchid names are supplied, where necessary, as a caption.

The illustrations drawn by Jim's son Jamie are pertinent and succinct and make the subject more easily understood.

56 pages.
Colour and B&W.



OUR DISCOUNT PRICE \$A12.80 (incl. GST)
was \$13.75 RRP (incl. GST) PLUS POSTAGE AND HANDLING



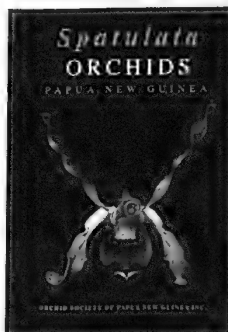
PRACTICAL GUIDE TO AUSTRALIAN ORCHID GROWING by Wayne Turville

The 64 page *Practical Guide to Australian Orchid Growing* was over two years in the making, being written by Wayne Turville who runs a large commercial orchid nursery in Victoria, Australia — specialising in Australian *Dendrobium* hybrids. This book was written for everybody from the absolute amateur through to the hardened "orchid nut". However, due to its low cost and practical nature, this book fills a huge void in orchid literature. Simple, easy to understand language, lots of pictures, and glorious examples of the some of the finest native orchids ever photographed both in nature and at orchid shows.

The title is somewhat misleading, as the text covers major cultivation principles for ALL orchid genera, not just the Australian native *Dendrobium* species and their hybrids. Topics covered (and illustrated) include Blooms, Starting a Collection, Housing Your Orchids, Day to Day Growing, Pests and Diseases, Physical Damage, Cymbidiums and *Sarcocochilus*, plus Bits and Pieces (information about orchid propagation, orchid societies and deflasking.). This booklet is recommended for all new orchid enthusiasts, and all who want to brush up on their cultural skills and knowledge.

64 pages, colour.
210mm x 146mm.
Softcover.

OUR DISCOUNT PRICE \$A12.50 (incl. GST)
was \$15.00 RRP (incl. GST) PLUS POSTAGE AND HANDLING



SPATULATA ORCHIDS OF PAPUA NEW GUINEA by Justin Tkatchenko and Steven Kami (featuring photographs by Rocky Roe)

This excellent A4 sized 96 page book is now out of print and we have secured the last few copies for our readers. It is not a scientific publication — but a very professional presentation — published by the Orchid Society of Papua New Guinea — showcasing the variety expressed within the native *Spatulata* *Dendrobiums* of Papua New Guinea. Over 100 colour photographs illustrate more than 30 species and colour variations. It also includes a number of newly discovered and currently undescribed species. The book includes distribution maps for each species and a section on cultivation, written by the local experts in their field. A required text for those interested in *Dendrobiums*, Orchids of PNG and tropical orchids in general. (Note: these copies are shrink-wrapped, and some pages may be stuck together. This can be rectified by either/or bending the pages or the use of a sharp knife to carefully separate the pages. This was accounted for in the reduced price.)

Strictly limited numbers.

96 pages.
Colour. Softcover.

OUR DISCOUNT PRICE \$A34.95 (incl. GST)
was \$75.00 RRP (incl. GST) PLUS POSTAGE AND HANDLING

mail order form

SEND TO:

(Payable to Australian Orchid Review)

Mastercard ☐

Visa ☐

MAIL ORDER:

PO Box 4812, North Rocks,
NSW 2151 Australia

PHONE ORDER:

0433 422 792

*Mr/Mrs/Ms _____ Signature _____

Address

EMAIL:

sales@australianorchidreview.com.au

PHONE AND EMAIL ORDERS
FOR CREDIT CARD USE ONLY

[illegible]

 *cut here for mail order bookshop*

cut here for australian orchid review subscription

AFFIX
POSTAGE
STAMP
HERE

AUSTRALIAN ORCHID REVIEW
PO BOX 4812
NORTH ROCKS
NSW 2151 AUSTRALIA

Orchid Mixes and Bacteria

by Ken Stewart

In the 1800s, orchids were collected from around the world and sent back to nurseries and aristocrats in Europe.

It was not understood where orchids were getting their nutrients from. Bacteria cover everything, the surface of the forest plants, the top soil, and water including the oceans. They ingest mineral salts, organic matter, milk proteins and the like, and exude nutrients. These are moved about with water, such as rain.

The only way to germinate orchid seed (before today's modern flasking techniques) was to sow them on top of a pot of an imported orchid, which had some original bacteria from where that plant had come from. This allowed the symbiotic metabolism to take place, allowing the nutrients to start germination.

As raw material such as pine bark is composted, the different bacteria work on the surface of the bark and release the nutrients. In this process the bacteria rely on Nitrogen, which releases some of the nutrients and absorbs about half for its own ingestion, so Nitrogen is always needed to be added to your orchid growing culture.

Studies show that the first 5 centimetres (2 inches) of top soil has about 80 different types of bacterium. The top layer being more Oxygen aerated with the lower layer having less Oxygen. Orchid culture is more related to the aerated bacteria.

Plastic pots are air-tight and water-tight barriers. When such a pot is watered, the water hits the inside hard surface and runs down the inside of the pot and out the drainage holes at the bottom. As the water leaves the pot, it draws down air to replace the water. This fresh air activates the aerated bacteria; hence you see the active roots running around the inside of the pots.

To test your compost: water pot, if water just dribbles out the bottom there is little air space left in the mix, so the plant probably needs repotting into fresh medium. A percentage of perlite added to the compost will both improve drainage and give added air space within the mix.

Organic fertilisers are better used in the warmer months when the bacteria are more active. Non-organic fertilisers are better used at half-strength during winter. Bacterium ingests both types of fertiliser. So keep in mind we are working with our invisible friends.

(Thanks to Geoffrey Hands from the Royal Horticultural Society and Phil Grech for references and discussion/advice on this topic.)

Ken Stewart

18 Woodville Street

Balwyn North, Victoria

ORCHIDS ON NEWBOLD

Seedlings and flowering size plants

Assorted species, paphs, aussie natives, cymbidiums

*Mail Order service available
Nursery open by appointment*

Stephen Stebbing
32 Newbold Avenue,
Craigieburn VIC 3064
Mob: 0412 352 604
Ph: 03 9308 2025
Fax: 03 9308 2029
email: stephenstebbing@aapl.net.au

AOR 044



Rosella

ORCHIDS

We grow
Asco's, Dendrobiums,
Vandas, Cattleyas,
Oncid Alliance, Sarcs,
Species, Paphs and
many other genera.

Web: www.rosellaorchids.com.au
E-mail: allan@rosellaorchids.com.au
Phone: 02 6643 3544
Fax: 02 6643 3599
Hours: By appointment only
95 Woolwich Road, South Grafton NSW 2460

AOR 030

Orchid Grower

Are your plants suffering from extreme weather conditions?

Shade Houses

by
Peter's Glen

Will create the ultimate micro climate for your orchids
Specialising in Orchid Houses for over 25 years

Design Features • Kit form with written instructions and video can be shipped everywhere • Simplicity • Portability • Modular (can be lengthened to meet your needs) • No Maintenance • Strong • Economical

151 Railway Parade, Thorneside, Brisbane Qld 4158
Ph 07 3207 2793 Fax 07 3822 2307

New Zealand agents: Roger & Isabel Clotworthy, 223 Range Road, Papamoa, NZ
Ph (07) 575 0600 Fax (07) 575 0661 Mobile (025) 271 2777



AOR194

Australian Orchid Review

Editor:

David P. Banks
Email: david@hillsdistrictorchids.com

Address editorial to:

The Editor, Australian Orchid Review,
39 Carole Street, Seven Hills, NSW 2147 Australia
☎ (02) 9674 4720
Email: david@hillsdistrictorchids.com

To join an orchid society contact these secretaries

New South Wales

Veronica Clowes
P.O. Box 5396, Chullora NSW 2190
Phone: (02) 9649 2719
Email: secretaryosnsw@yahoo.com.au

Queensland

Maree Illingworth
P.O. Box 126BC, Brown Plains 4118
Phone: (07) 3800 3213
Email: r.millingworth@uq.net.au

Western Australia

R. McGrath
P.O. Box 58, Como 6152
Phone: (08) 9367 9306

Victoria

Diane Sharam
1 Tynan Street, West Preston, 3072
Phone: (03) 9478 9764

Frankie Fraser

Phone: (03) 9802 9929
Email: frankie_fraser@bigpond.com

South Australia

Coralie Hills
G.P.O. Box 730, Adelaide 5001
Phone: (08) 8721 3213

Don Higgs

P.O. Box 134, Myponga SA 5202
Phone: (08) 8558 6247
Email: jhiggs@internode.on.net

Tasmania

Jan Dicker
G.P.O. Box 467, Hobart 7001
Phone: (03) 6247 9636
Email: jtdicker@bigpond.com

Northern Territory

Tammie Coyne
P.O. Box 38493, Winnellie 0821

To join a Cymbidium Club in your state, contact:

Cymbidium Club of Australia Inc.

Secretary, Peter Moore
10 Stephanie Street, Padstow NSW 2211
Phone: (02) 9721 0572
Web: www.ccansw.com.au

The Cymbidium Orchid Society of Victoria Inc.

Secretary, Jenifer Robinson
54 Worthington Road, Devon Meadows VIC 3977
Phone: (03) 5998 2226

Cymbidium Orchid Club of South Australia Inc.

Secretary, Jeanne Hall
18 Coorilla Avenue, Glenelg North SA 5045
Phone: (08) 8294 5562

The Cymbidium Orchid Club of Western Australia Inc.

Secretary, Alice Lang
20 Urch Road, Kalamunda WA 6076
Phone: (08) 9257 1056

Publisher
HILLS ORCHID PUBLISHING PTY LIMITED
ABN 83 150 020 189

39 Carole Street, Seven Hills NSW 2147 Australia
Phone: 0433 422 792 or 0412 123 036

Printed by

bluestar*PRINT

While the Proprietors of the *Australian Orchid Review* endeavour to assure the reliability of advertising and editorial, neither the Proprietor of the "*Australian Orchid Review*" nor the Editor can assume responsibility for the advice or transaction between advertisers and readers. The opinions and recommendations that may appear in this publication regarding the selection and use of specific plant-care products, including but not limited to pesticides, fungicides and herbicides, are those of the individual authors, and not those of the *Australian Orchid Review*, which neither adopts nor endorses such opinions and recommendations and disclaims all responsibility for them. When selecting and using such products, readers should seek and obtain the advice of the manufacturer and of responsible government departments.

ADVERTISERS INDEX

Adelaide Orchids	22
American Orchid Society	43
Aranbeem Orchids	23
Aussie Plant Tags	49
Aussie Shade & Hothouses	13
Australian Orchid Foundation	15
B & T Ferns and Orchids.....	18
Burleigh Park Orchid Nursery.....	9
Cattleyas Online	43
Cedarvale Orchids.....	31
Colin Campbell Chemicals	13
Dark Star Orchids.....	11
David Keanelly Orchids.....	11
Easy Orchids	15
Hills District Orchids	IFC
Mallee Phallies.....	52
Miriam Ann Orchids.....	19
Mount Beenak Orchids.....	58
Nicky's Slippers.....	31
Orchid Pot Company, The.....	49
Orchid Productions.....	49
Orchid Species Plus	58
Orchid Tray Company, The	19
Orchidaceous Books.....	26
Orchidaceous Supplies.....	43
Orchids North	58
Orchids on Newbold	63
Peter's Glen Shadehouses.....	63
Queensland International Orchid Fair	BC
Red Diamond Design.....	17
Retina Australia	8
Rosella Orchids.....	63
Springfield Orchids.....	53
Sydney International Orchid Fair	BC
Tinonee Orchids.....	23
Western Orchid Laboratories	36

BUYER'S GUIDE

Buy, sell or swap. Five lines (approximately thirty words) for only \$30, each additional line (approximately six words) \$4 (includes GST).

LEARN TO EARN – With our nationally recognised Courses in Certificates II and III in Horticulture and Certificates II and III in Orchid Growing. Learn by Distance learning at your own pace. Contact The Orchid Academy® (National provider No. 31691) Ph: 07 5596 7429. Email: robert@orchidacademy.com Web: www.orchidacademy.com

ORCHID, LANDSCAPING & HORTICULTURAL COURSES, DISTANCE EDUCATION – Short courses, Certificates, Diplomas. Over 400 courses including Cut Flower Orchids, Hydroponics, Tissue Culture, Orchid Culture, Plant Varieties, Landscaping and more. Study by CD, online, or by traditional correspondence. Highly qualified tutors. FREE 87 page handbook. Phone: 07 5562 1088. Websites: www.acs.edu.au, www.hortcourses.com. P.O. Box 2092, Nerang MDC, Qld 4211.

2012 ORCHID EVENTS – What's on!

February 26 Hills District Orchids Autumn Open Day – Northmead, NSW

March 2-3 Queensland International Orchid Fair – Bray Park, Qld

April 13-14 Sydney International Orchid Fair – Castle Hill Showground, NSW

May 11-13 Mother's Day Spectacular – Port Macquarie, NSW

May 25-27 Orchids Out West – Hawkesbury, NSW

June 1-3 Orchids in Paradise – Southport, Qld

June 23-24 Mingara Orchid Fair – Central Coast, NSW

July 8 Tinonee Orchids Open Day & Show – Taree, NSW

July 29 Hills District Orchids Winter Open Day – Northmead, NSW

August 10-12 National Orchid Extravaganza – Dural, NSW

August 17-19 St Ives Orchid Fair – St Ives Showground, NSW

August 24-26 Victorian International Orchid Fair & Melbourne Orchid Spectacular – Keysborough, Vic

September 1-2 Dendrobium speciosum Spectacular – Kempsey, NSW

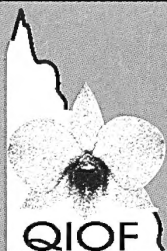
September 14-16 19th AOC Conference & Show – Perth, WA

September 23 Hills District Orchids Spring Open Day – Northmead, NSW

October 5-7 Southern Orchid Spectacular – Cronulla, NSW



Stanhopeas, due to their flowering habit, are often grown in baskets, but may also be incorporated into the garden. This robust *Stanhopea nigroviolacea* is growing in the main fork of a Queensland Tree Waratah (*Alloxylon flammeum*) in western Sydney. Paperbarks, banksias, jacarandas and frangipanis also make ideal hosts for these bizarre orchids.



Queensland International Orchid Fair

**Friday 2nd March &
Saturday 3rd March, 2012**

Venue: Pine Rivers PCYC - Baker Street, Bray Park

Open from 8am each day

**Free
Entry &
Parking**

Leading nurseries from across the Country including
specialist plant sellers and International guest vendor;
Sakdisri & Daughters Nursery from Thailand.
For a full list of vendors see our website.

For more info contact:

Barry Kable: 0414 725 294 • Murray Shergold: (02) 6682 2635 • Ray Clement: (02) 6553 1012



SYDNEY INTERNATIONAL ORCHID FAIR

Friday 13th & Saturday 14th April, 2012

**Open from 9am-7pm Friday
and 9am-5pm Saturday**

**Harvey Lowe Pavilion Castle Hill Showground
Cnr. Showground & Carrington Roads**

**Free
Entry &
Parking**

Leading nurseries from across the Country including specialist plant sellers
and International guest vendor; Ching Hua Orchids from Taiwan.
For a full list of vendors see our website.

For more info contact:

David Banks: (02) 9674 4720 Mike Harrison: (02) 4576 3290 Darryl Smedley: (02) 9679 0494

Visit our website: www.orchidfair.com.au